

# TC-WR77/WR750


## SERVICE MANUAL

TC-WR77/WR750:  
US Model

TC-WR750:  
Canadian Model  
AEP Model  
E Model



Photo: TC-WR750

Dolby noise reduction manufactured under license from  
Dolby Laboratories Licensing Corporation.  
"DOLBY" and the double-D symbol  are trademarks of  
Dolby Laboratories Licensing Corporation.

### SPECIFICATIONS

Recording system 4-track 2-channel stereo  
Fast-winding time

Approx. 90 sec. (with C-60 cassette)

Bias frequency 105 kHz


Signal-to-noise ratio (NAB, at peak level)

Dolby NR switch	OFF	B-TYPE ON	C-TYPE ON
Cassette			
TYPE IV (Sony METAL-ES)	58 dB	65 dB	TC-WR77:72 dB TC-WR750:71 dB
TYPE II (Sony UX-S)	57 dB	64 dB	70 dB
TYPE I (Sony HF-S)	54 dB	61 dB	67 dB


Total harmonic distortion

1.0% (with Sony METAL-ES cassette)

#### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  
 ON THE SCHEMATIC DIAGRAMS AND IN THE  
PARTS LIST ARE CRITICAL TO SAFE OPERATION.  
REPLACE THESE COMPONENTS WITH SONY PARTS  
WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS  
MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

#### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET  
UNE MARQUE  SUR LES DIAGRAMMES SCHÉ-  
MATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES  
POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REM-  
PLACER CES COMPOSANTS QUE PAR DES PIÈCES  
SONY DONT LES NUMÉROS SONT DONNÉS DANS CE  
MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR  
SONY.

Model Name Using Similar Mechanism	DECK A: TC-WR730
	DECK B: TC-WR730
Tape Transport Mechanism Type	DECK A: TCM-CMAY A-3
	DECK B: TCM-CMAY B-10

Frequency response (DOLBY NR OFF)

TYPE IV cassette (Sony METAL-ES)	30 - 15,000 Hz (±3 dB) 30 - 13,000 Hz (0VU recording)
TYPE II cassette (Sony UX-S)	30 - 15,000 Hz (±3 dB)
TYPE I cassette (Sony HF-S)	30 - 14,000 Hz (±3 dB)

Wow and flutter 0.07% WRMS (NAB)

Inputs/Outputs

Line inputs (phono jacks)	Sensitivity	77.5 mV (-20 dB)
	Input impedance	50 kilohms
Line outputs (phono jacks)	Rated output level	0.44 V (-5 dB) at load impedance 47 kilohms
	Load impedance	Over 10 kilohms
Headphones output (stereo phone jack)	Output level	-28 dB at load impedance 8 ohms

0 dB = 0.775 V

— Continued on page 2 —

STEREO CASSETTE DECK  
**SONY**®



TC

## General

### Power requirements

US, Canadian Model:

120 V ac, 60 Hz

AEP Model:

220 V ac, 50/60 Hz

E Model:

120, 220, 240 V ac, adjustable 50/60 Hz

### Power consumption

23 W

### Dimensions

Approx. 430 x 130 x 275 mm (w/h/d)  
(17 x 5 $\frac{1}{8}$  x 10 $\frac{7}{8}$  inches)

including projecting parts and controls

### Weight

Approx. 5.0 kg (11 lbs 1 oz)

### Supplied accessories

Connecting cord (2)

Remote control cord (1)

### Optional accessory

Wireless remote control unit RM-88

(  $\bullet$  REC MUTE button of this unit functions as the AMS/BLANK SKIP button of the TC-WR77 during playback.)

## Table of Contents

<u>Section</u>	<u>Title</u>	<u>Page</u>
SECTION 1	OUTLINE .....	3
1-1.	LOCATION AND FUNCTION OF CONTROLS .....	3
1-2.	IC501 (M50742-404) PIN FUNCTIONS .....	6
1-3.	BLOCK DIAGRAM .....	9
SECTION 2	DISASSEMBLY .....	11
SECTION 3	ADJUSTMENTS .....	13
3-1.	MECHANICAL ADJUSTMENTS .....	13
3-2.	ELECTRICAL ADJUSTMENTS .....	14
SECTION 4	CIRCUIT BOARDS LOCATION .....	18
SECTION 5	DIAGRAMS .....	19
5-1.	MOUNTING DIAGRAM .....	19
5-2.	SCHEMATIC DIAGRAM .....	23
SECTION 6	EXPLODED VIEWS AND PARTS LIST .....	29
SECTION 7	ELECTRICAL PARTS LIST .....	34
SECTION 8	TROUBLESHOOTING .....	41

## FEATURES

### Double decks

The unit consists of two decks: deck A for playback and deck B for recording/playback.

### Two-speed dubbing

Normal speed for dubbing while monitoring the selections.  
High speed for dubbing the whole cassette in a short time.

### Edit functions

By the auto pause function, the playback and recording decks pause automatically each time the played back selection ends, then you can search for another selection to dub.

By pausing the decks manually while dubbing, you can search for any portion to be dubbed with the rightward/leftward fast winding.

### Type B and C Dolby noise reduction\* system

Reduces tape hiss noise in low level high frequency signals.

### Quick reverse (Deck B)

Enables almost continuous playback and recording while the tape side is being switched.

### Other features

- Relay playback for long hours
- Synchronized recording with a turntable system
- Record muting
- Handy remote control operation (with the optional Sony RM-88 remote control unit)

\* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
"DOLBY" and the double-D  $\square\square$  are trademarks of Dolby Laboratories Licensing Corporation.

## SECTION 1 OUTLINE

### SAFETY CHECK-OUT (US Model)

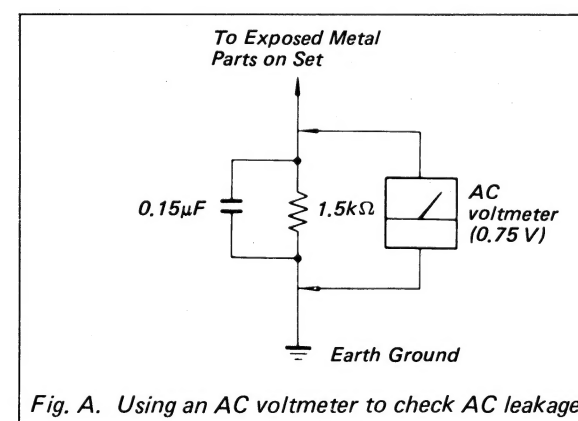
After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

#### LEAKAGE TEST

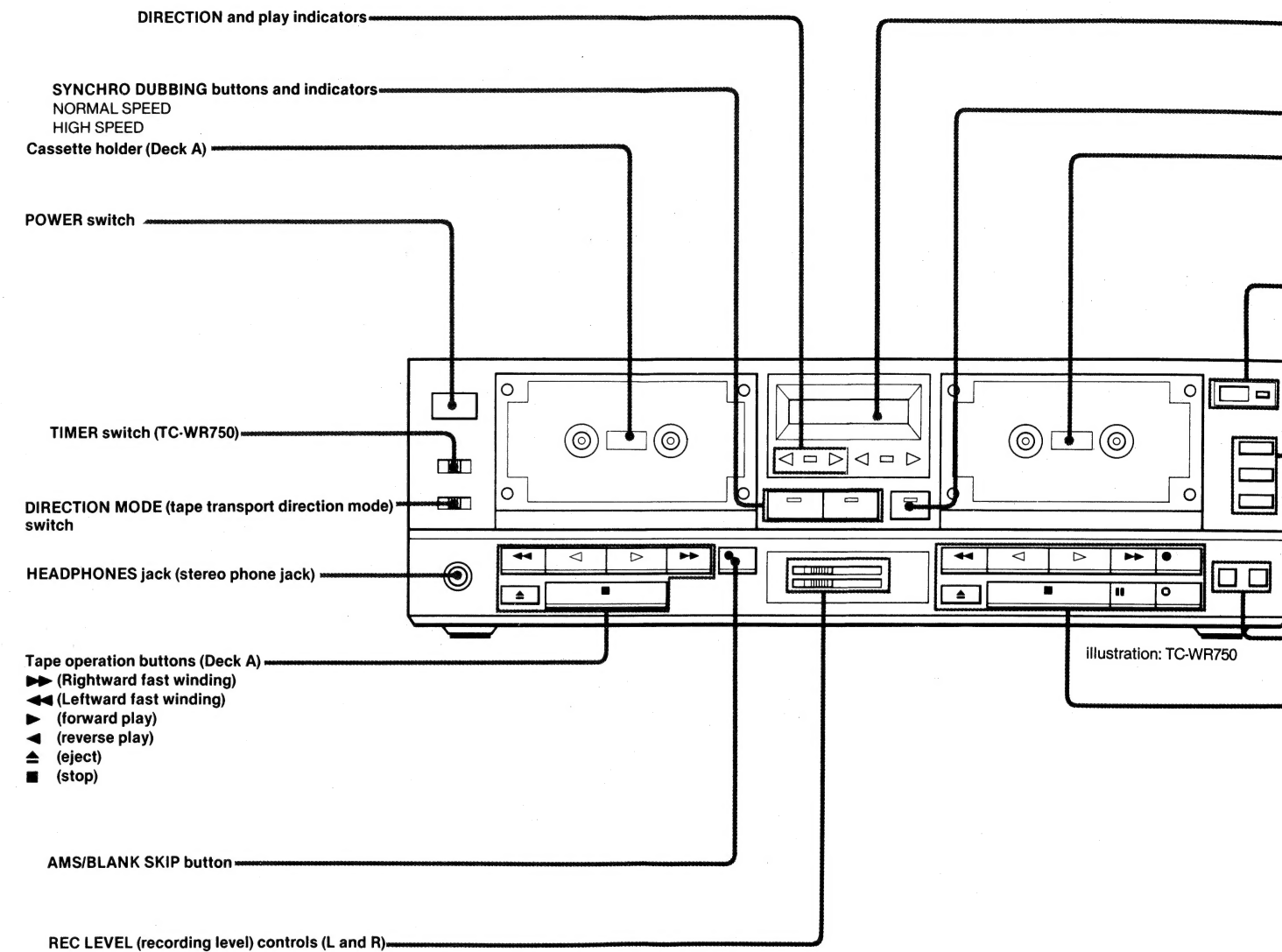
The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

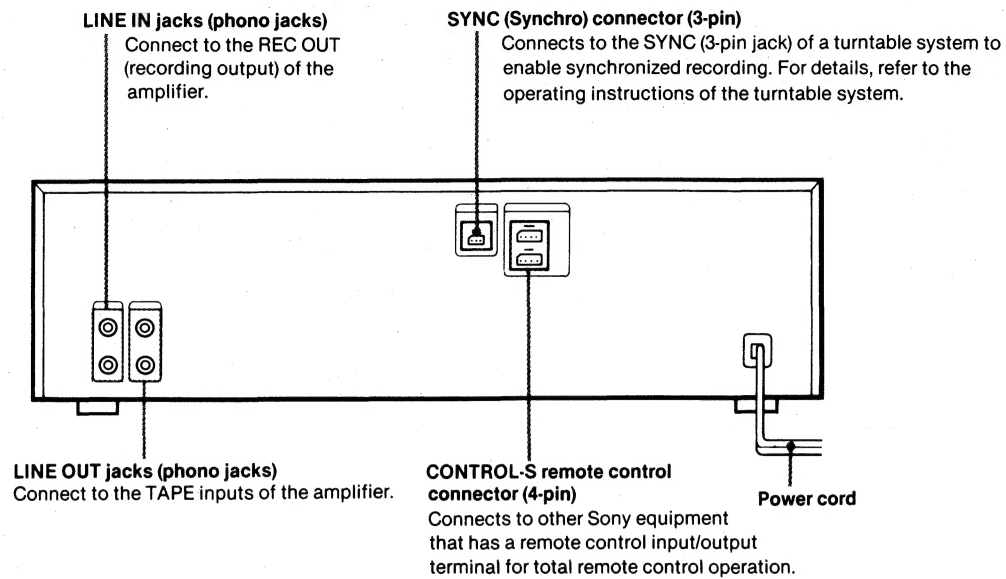
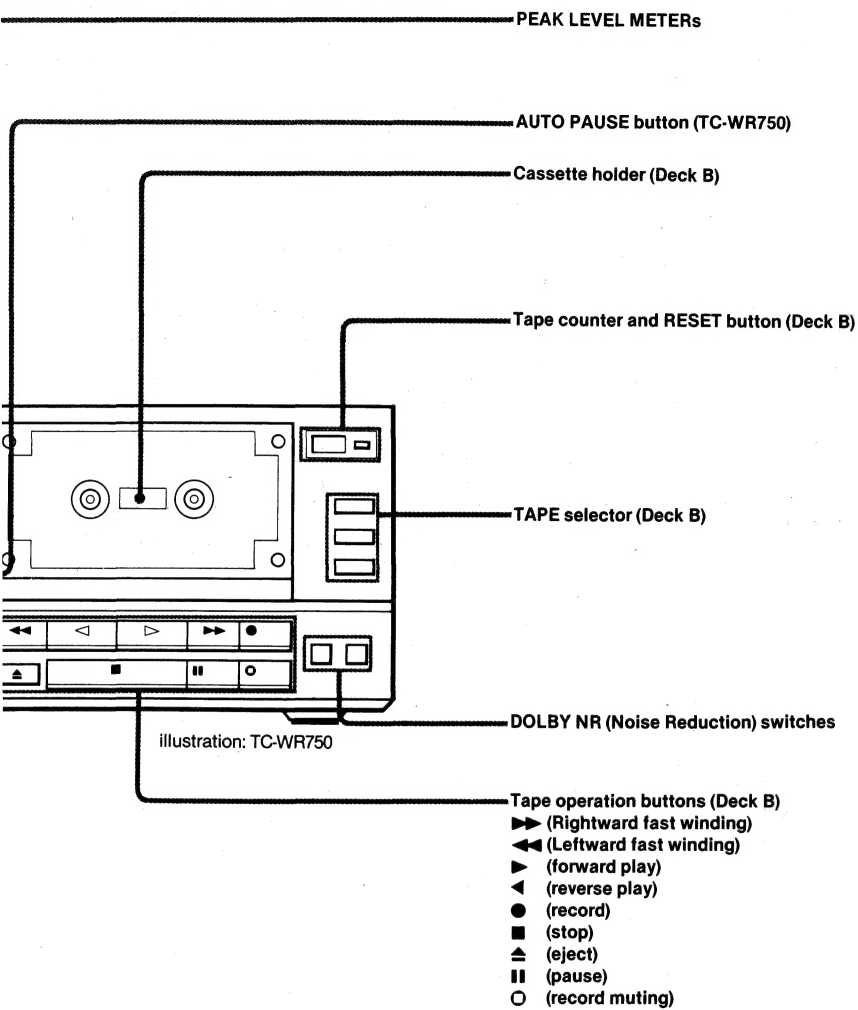


### 1-1. LOCATION AND FUNCTION OF CONTROLS

#### FRONT PANEL



## REAR PANEL




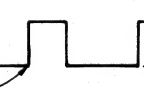
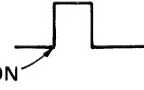
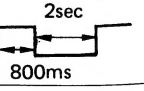


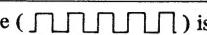
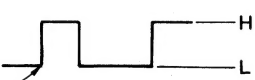

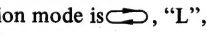
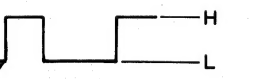
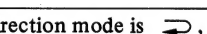
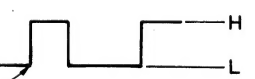
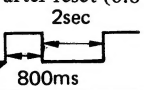
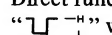


## 1-2. IC501 (M50742-404) PIN FUNCTIONS

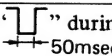
IC501 (M50742-404) is a 4 bit microcomputer which controls the mechanism, does key input and LED display.

The pin functions, key matrix and LED matrix descriptions follow.

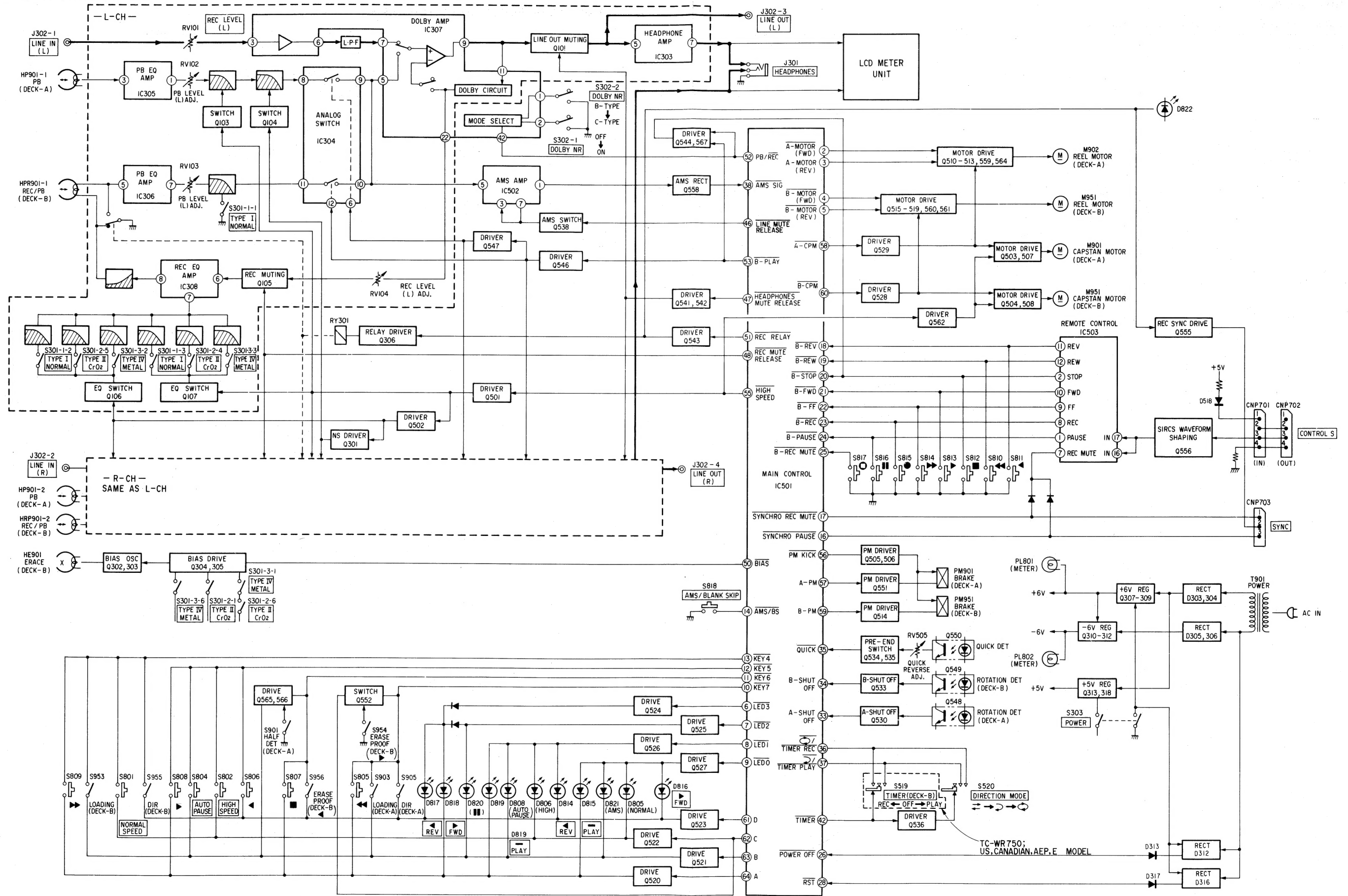
Pin No.	Pin Name	I/O	Function
1	VDD	—	Power supply pin.
2	A-MOTOR (FWD)	O	A deck reel motor (FWD) drive output pin. “L” when A deck reel motor rotates FWD, otherwise “H”.
3	A-MOTOR (REV)	O	A deck reel motor (REV) drive output pin. “L” when A deck reel motor rotates reverse, otherwise “H”.
4	B-MOTOR (FWD)	O	B deck reel motor (FWD) drive output pin. “L” when B deck reel motor rotates FWD, otherwise “H”.
5	B-MOTOR (REV)	O	B deck reel motor (REV) drive output pin. “L” when B deck reel motor rotates reverse, otherwise “H”.
6	LED3	O	Anode side output pins to dynamically light up LED.
7	LED2		
8	LED1		
9	LED0		
10	KEY7	I	Key matrix key return signal input pins.
11	KEY6		
12	KEY5		
13	KEY4		
14	AMS/BS	I	AMS/BS (blank skip) key input pin.
15	TC STOP	I	Direct function stop signal input pin. “L” when amp function is at “TAPE”, “H” otherwise. When “H” is input during playback, stop occurs, but not during recording.
16	SYNCHRO-■	I	Synchro pause release signal input pin. “L” when synchro pause release signal is input; otherwise “H”. Only accepted when B deck is in recording mute or recording pause. Not used.
17	SYNCHRO-●	I	Synchro recording mute signal input pin. “L” when synchro recording mute signal is input; otherwise “H”. Only accepted during B deck recording.  If 16 SYNCHRO-■ and 17 SYNCHRO-● above both input “L” at the same time, remote control AMS/● input is judged, and during recording, recording mute operation results.
18	B-◀	I	B deck ◀ key input pin.
19	B-◀◀	I	B deck ◀◀ key input pin.
20	B-■	I	B deck ■ key input pin.
21	B-▶	I	B deck ▶ key input pin.
22	B-▶▶	I	B deck ▶▶ key input pin.
23	B-●	I	B deck ● key input pin.
24	B-■	I	B deck ■ key input pin.
25	B-●	I	B deck ● key input pin.
26	POWER OFF	I	Power detection pin. “H” is input for power ON and “L” for power OFF. For power OFF when head is up, the head is lowered immediately.
27	GND	—	Ground pin.
28	RST	I	External reset signal input pin. Reset operation is performed for “L” level input.

Pin No.	Pin Name	I/O	Function
29	XI	I	Clock oscillation pins. (3.58 MHz on this model.)
30	XO	O	
31	CLK	O	Timing signal output pin. Supplies 895 kHz clock to RMS controller.
32	GND	—	Ground pin.
33	A-SHUT OFF	I	<ul style="list-style-type: none"> <li>A deck reel table rotation signal input pin. input during A deck PB, FF, FR and “H” for 0.5 seconds during FF or FR, shut off c</li> <li>During power ON Switching input pin. 1 direction playback:  2 direction playback: “H”</li> </ul>
34	B-SHUT OFF	I	B deck reel table rotation signal input pin. during B deck PB, recording, FF, FR and “H” recording or for 0.5 seconds during FF or F
35	Q	I	B deck leader tape sensor (quick sensor) signal. At leader tape: “L” At magnetic coating: “H” When “L” is input during B deck playback. However, only operates for from FWD to R for 8 seconds from the start of FWD.
36	↺/TIMER REC	I	<ul style="list-style-type: none"> <li>Direction mode switching signal input pin. otherwise “H”.</li> <li>During power ON TIMER REC signal. TIMER REC:  Otherwise: “H”</li> </ul>
37	↻/TIMER PLAY	I	<ul style="list-style-type: none"> <li>Direction mode switching signal input pin. otherwise “H”.</li> <li>During power ON TIMER PLAY signal. TIMER PLAY:  Otherwise: “H”</li> </ul>
38	AMS SIG	I	AMS signal input pin. “H” during recorded
39	BACK	I	RMS control signal input pin. Receives “back” or “go” commands from F. Both “H” during RMS OFF, both “L” when put, for “back” command, pin 39 BACK: “L” mand, pin 39 BACK: “H”, pin 40 GO: “L” Not used.
40	GO		
41	REQ	O	Output pin for request signal to RMS controller from RMS controller during RMS. Not used
42	TIMER	O	“L” for two seconds only after reset (0.8 sec  800ms
43	TC FUNCTION	O	Direct function signal output pin. “L” when A deck and B deck ▶ or ◀ Not used.

I/O	Function
I O	Clock oscillation pins. (3.58 MHz on this model.)
O	Timing signal output pin. Supplies 895 kHz clock to RMS controller. Not used.
—	Ground pin.
I	<ul style="list-style-type: none"> <li>A deck reel table rotation signal input pin. When a pulse (  ) is input during A deck PB, FF, FR and "H" continues for 2 seconds during PB or 0.5 seconds during FF or FR, shut off occurs.</li> <li>During power ON Switching input pin for 1 direction/2 direction playback. 1 direction playback:  H L POWER ON 2 direction playback: "H"</li> </ul>
I	B deck reel table rotation signal input pin. When a pulse (  ) is input during B deck PB, recording, FF, FR and "H" continues for 2 seconds during PB or recording or for 0.5 seconds during FF or FR, shut off occurs.
I	B deck leader tape sensor (quick sensor) signal input pin. At leader tape: "L" At magnetic coating: "H" When "L" is input during B deck playback or recording, B deck reverses rotation. However, only operates for from FWD to REV direction. Also, does not operate for 8 seconds from the start of FWD.
I	<ul style="list-style-type: none"> <li>Direction mode switching signal input pin. When direction mode is , "L", otherwise "H".</li> <li>During power ON TIMER REC signal input pin. TIMER REC:  H L POWER ON Otherwise: "H"</li> </ul>
I	<ul style="list-style-type: none"> <li>Direction mode switching signal input pin. "L" when direction mode is , otherwise "H".</li> <li>During power ON TIMER PLAY signal input pin. TIMER PLAY:  H L POWER ON Otherwise: "H"</li> </ul>
I	AMS signal input pin. "H" during recorded portion, "L" during blank.
I	RMS control signal input pin. Receives "back" or "go" commands from RMS controller during RMS. Both "H" during RMS OFF, both "L" when RMS is set, then after pin 41 REQ output, for "back" command, pin 39 BACK: "L", pin 40 GO: "H". For "go" command, pin 39 BACK: "H", pin 40 GO: "L" are input from RMS controller. Not used.
O	Output pin for request signal to RMS controller. Outputs "L" to receive command from RMS controller during RMS. Not used.
O	"L" for two seconds only after reset (0.8 seconds), otherwise "H". 
O	Direct function signal output pin. "  " when A deck and B deck  or  key is ON, otherwise "H". Not used.

Pin No.	Pin Name	I/O	Function
44	SIRCS MUTE	O	Remote control prohibit signal output pin. "L" during dubbing so that remote control can not operate. Otherwise "H".
45	A-PLAY MONITOR	O	A deck playback monitor signal output pin. "L" during A deck playback to inform RMS controller of playback. "H" at other times. Not used.
46	LINE MUTE RELEASE	O	Line muting release signal output pin. "L" for A deck, B deck playback and during dubbing, "H" at other times.
47	H.P MUTE RELEASE	O	Headphone, line output meter muting release signal output pin. "L" for A deck playback, B deck playback and recording, and dubbing; otherwise "H".
48	REC MUTE RELEASE	O	Recording muting release signal output pin. "L" during B deck recording and dubbing, otherwise "H".
49	A-RMS MONITOR	O	A deck RMS monitor signal output pin. "L" during RMS operation to inform RMS controller of RMS operation. Not used.
50	BIAS	O	Recording bias oscillation control signal output pin. "L" during B deck recording and dubbing, otherwise "H".
51	REC RELAY	O	Relay control signal output pin. "L" when B deck ● (REC) key, HIGH SPEED DUBBING key or NORMAL SPEED DUBBING key is ON, otherwise "H".
52	PB/REC	O	Playback/recording switching signal output pin. "L" when B deck ● (REC) key is ON, otherwise "H".
53	B-PLAY	O	A deck/B deck switching signal output pin. "L" during B deck playback, otherwise "H".
54	A-PLAY	O	A deck/B deck switching signal output pin. "L" during A deck playback; otherwise "H". Not used.
55	HIGH SPEED	O	Normal speed dubbing/high speed dubbing switching signal output pin. "L" for high speed dubbing, otherwise "H".
56	PM-KICK	O	Plunger solenoid kick signal output pin.  during plunger solenoid kick, otherwise "H".
57	A-PM	O	A deck plunger solenoid control signal output pin. "H" when A deck plunger solenoid is ON, otherwise "L".
58	A-CPM	O	A deck capstan motor control signal output pin. "L" when A deck capstan motor is ON, otherwise "H". This output is used to lower reel motor torque.
59	B-PM	O	B deck plunger solenoid control signal output pin. "H" when B deck plunger solenoid is ON, otherwise "L".
60	B-CPM	O	B deck capstan motor control signal output pin. "L" when B deck capstan motor is ON, otherwise "H". This output is used to lower reel motor torque.
61 62 63 64	D C B A	O	Key matrix signal source output and cathode side output for dynamic lighting of LED.

## 1-3. BLOCK DIAGRAM

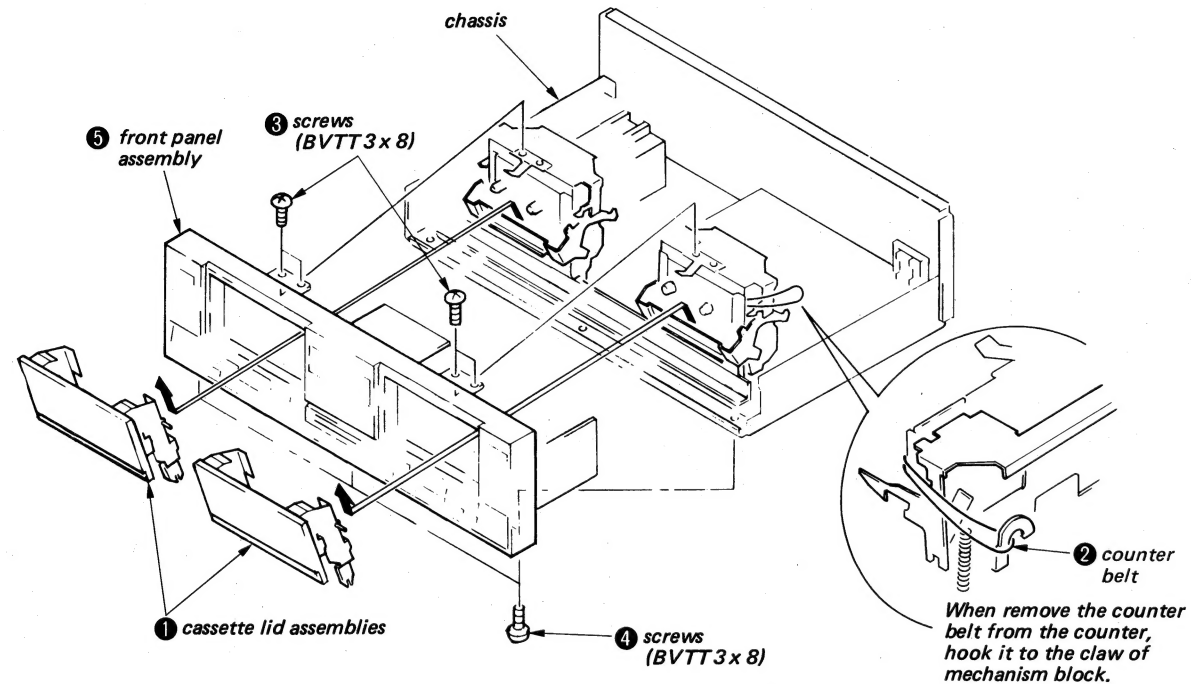


## SECTION 2 DISASSEMBLY

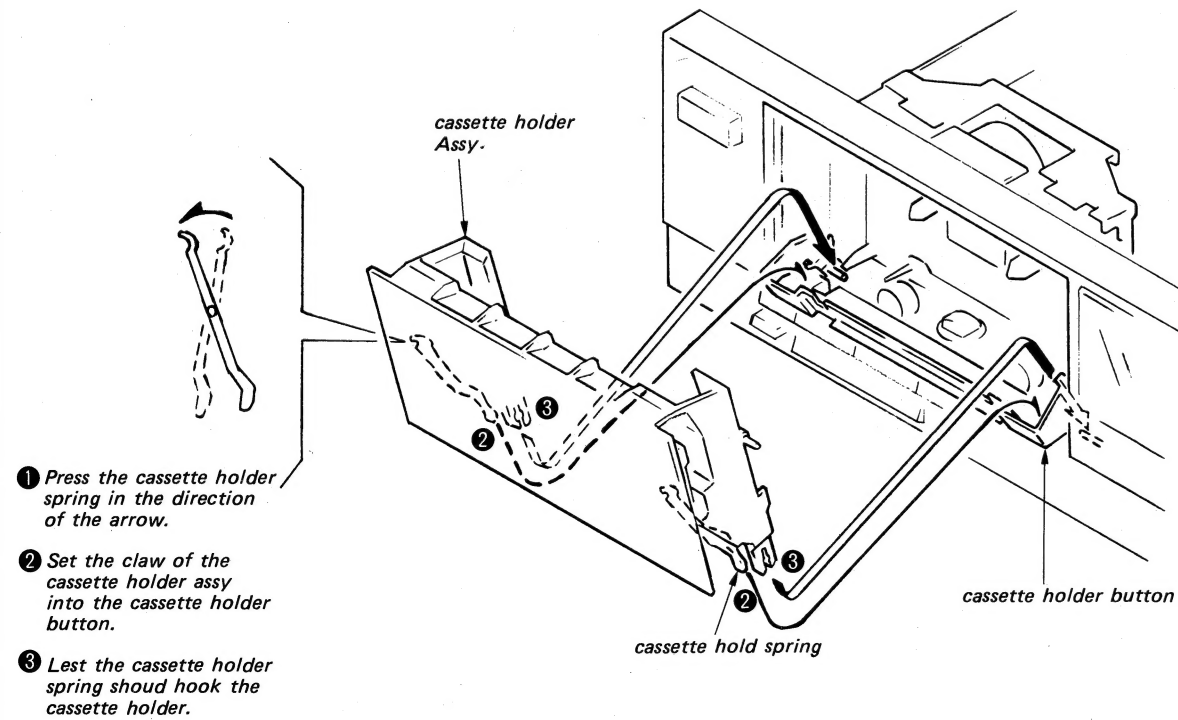
### 2-1. DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

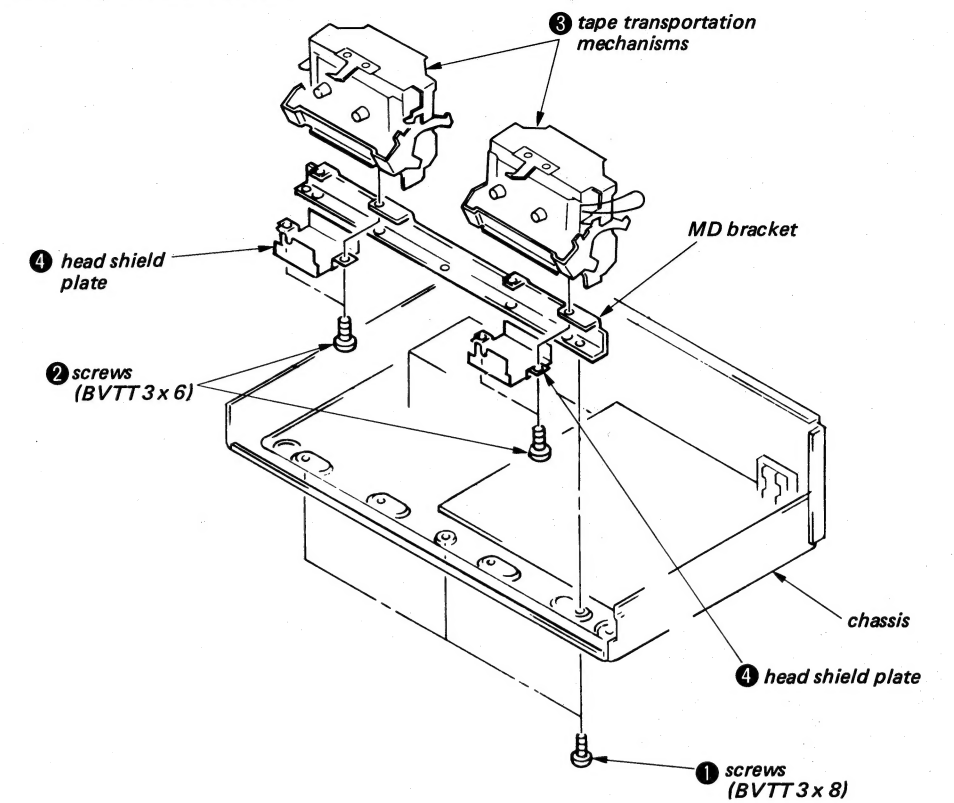
#### FRONT PANEL



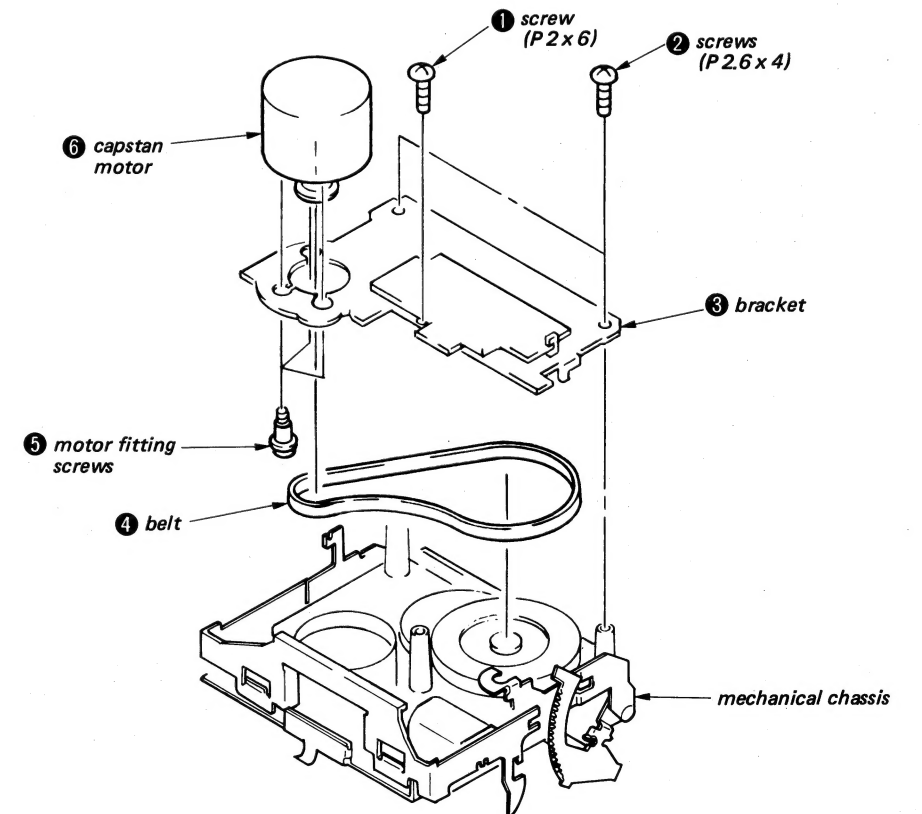
#### CASSETTE HOLDER



#### TAPE TRANSPORTATION MECHANISM



#### MOTOR BELT



## SECTION 3 ADJUSTMENTS

### 3-1. MECHANICAL ADJUSTMENTS

#### PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
 

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

#### Torque Measurement

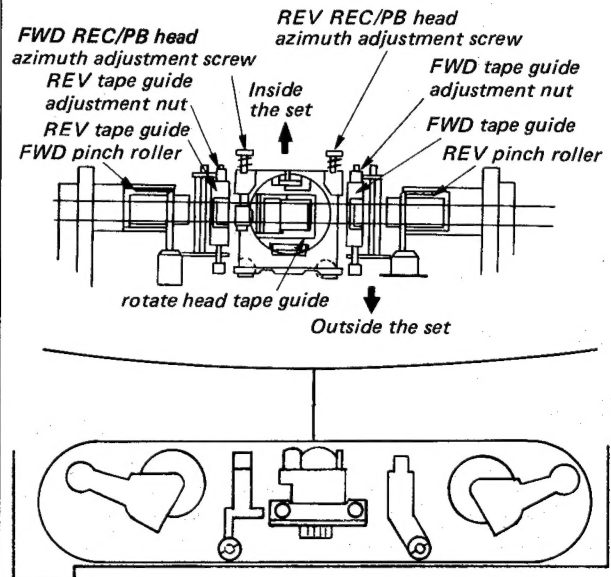
Torque	Torque meter	Meter reading
FWD	CQ-102C	25 to 75 g·cm (0.35 to 1.04 oz·inch)
FWD Back tension	CQ-102C	1 to 10 g·cm (0.014 to 0.14 oz·inch)
REV	CQ-102RB	25 to 75 g·cm (0.35 to 1.04 oz·inch)
REV Back tension	CQ-102RB	1 to 10 g·cm (0.014 to 0.14 oz·inch)
FF, REW	CQ-201B	80 to 180 g·cm (1.11 to 2.5 oz·inch)

#### Tape Path Adjustment

##### Procedure:

1. Insert the mirror cassette (CQ-009 or CQ-012C).
2. Mode: FWD  
Adjust FWD tape guide nuts and adjustment shims for no tape curl.
3. Mode: REV  
Adjust REV tape guide nuts and adjustment shims for no tape curl.
4. After the adjustments, apply suitable locking compound to the parts adjusted.

##### Adjustment Location:





## 3-2. ELECTRICAL ADJUSTMENTS

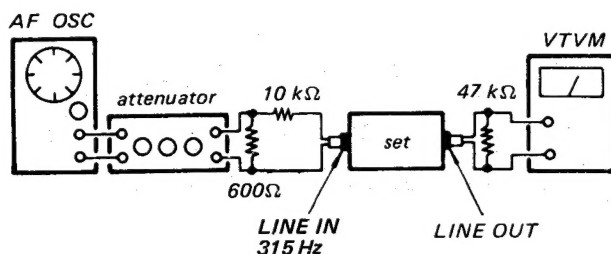
1. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch: OFF  
 SYNCHRO DUBBING switch: NORMAL SPEED  
 TAPE SELECT switch: TYPE I (DECK B)

- Standard Record:  
 Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Mode: record



### Standard Input Level

	LINE IN
source impedance	10 kΩ
input level	0.25 V (-10 dB)

### Standard Output Level

	LINE OUT
load impedance	47 kΩ
output level	0.44 V (-5 dB)

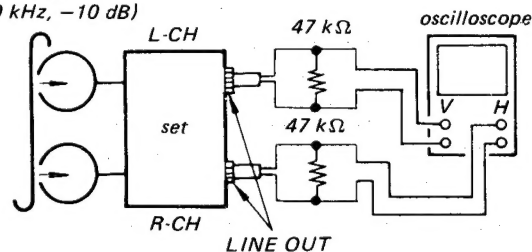
## Record/Playback Head Azimuth Adjustment **DECK A**

**DECK B**

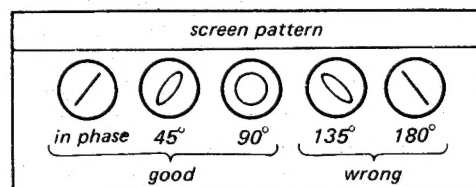
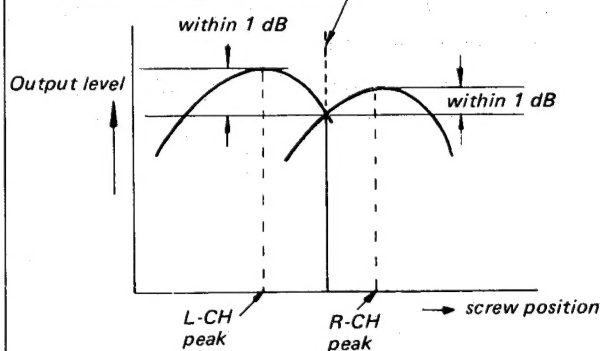
### Procedure:

1. Mode: playback (FWD/REV)

test tape  
 P-4-A 100  
 (10 kHz, -10 dB)

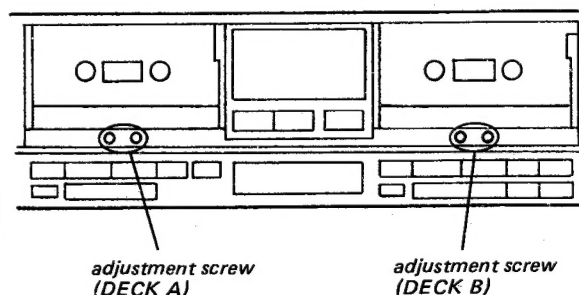


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.



3. After the adjustment finishing with tightening direction, lock the adjustment screw with locking compound.
4. After the locking compound dried out, reassemble the function switch block.

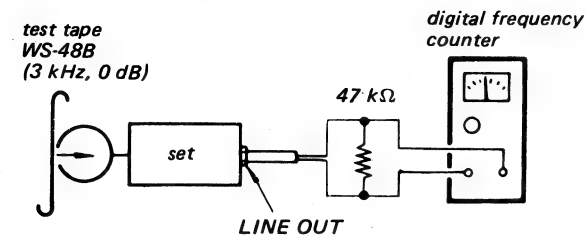
### Adjustment Location:



# Tape Speed Adjustment **DECK A** **DECK B**

## Procedure:

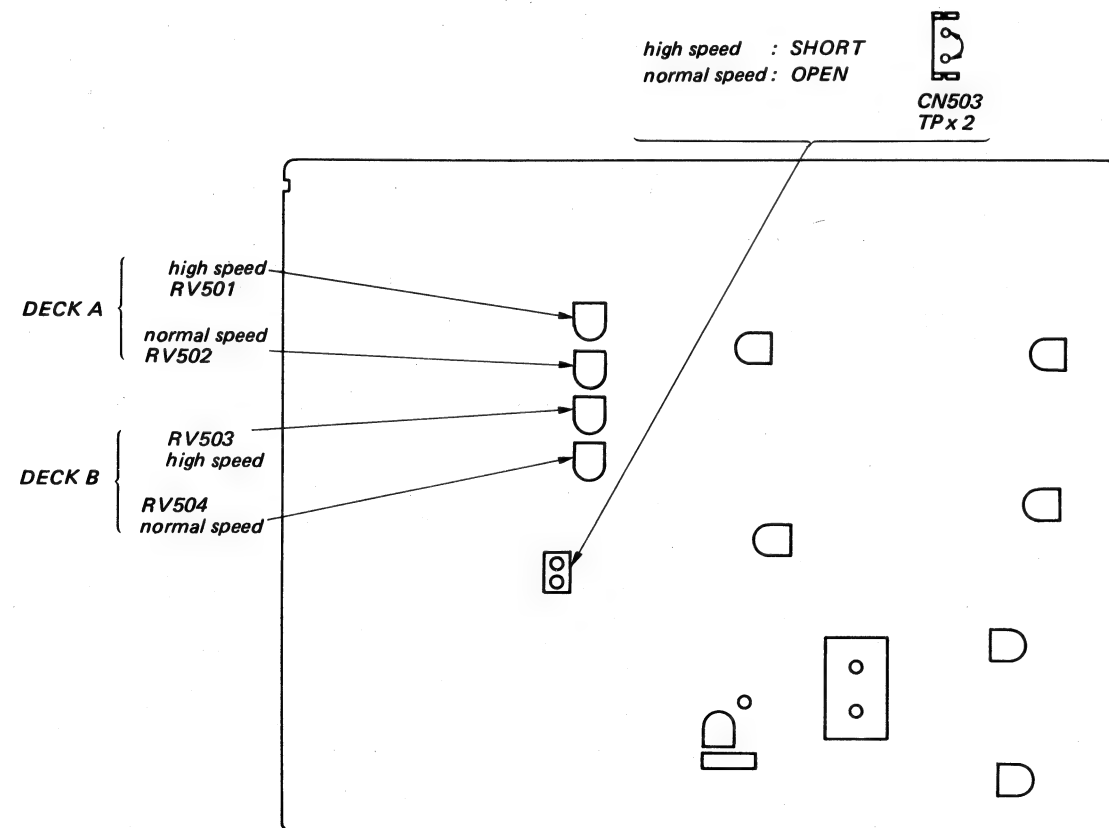
Mode: playback (FWD)



## Specifications:

	Adjustment part		Test pin (TP x2)	Digital frequency counter
High speed	Deck A	RV501	SHORT	5960 to 6040 Hz
	Deck B	RV503		
Normal speed	Deck A	RV502	OPEN	2980 to 3020 Hz
	Deck B	RV504		

Adjustment Location: audio board

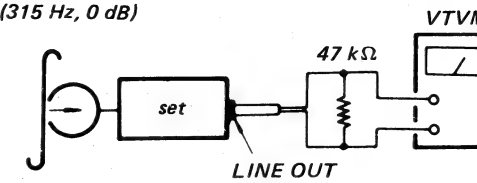


# Playback Level Adjustment **DECK A** **DECK B**

## Procedure:

Mode: playback

test tape  
P-4-L300  
(315 Hz, 0 dB)



Adjust,

DECK-A side RV102 (L-CH), RV202 (R-CH)

DECK-B side RV103 (L-CH), RV203 (R-CH)

so that the specifications are satisfied.

## Specification:

LINE OUT level: 0.41 to 0.46 V

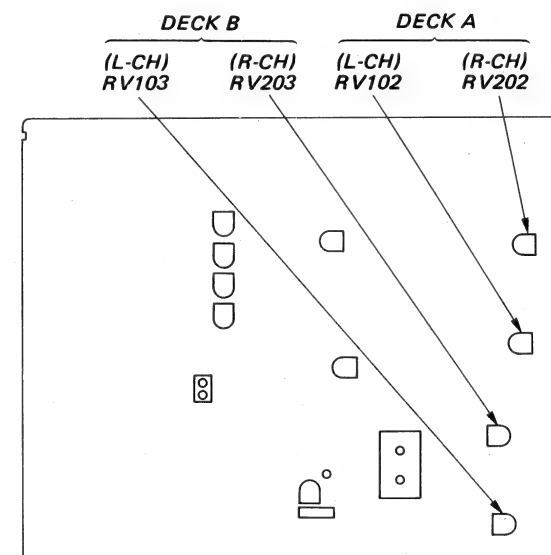
(-5.5 to -4.5 dB)

level difference between the channels:

within 0.5 dB

Confirm that LINE OUT level is not changed when Playback and Stop are repeated.

Adjustment Location: audio board



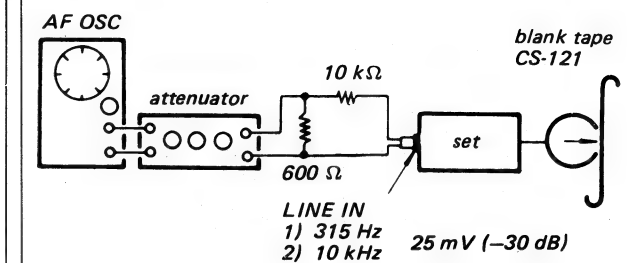
# Record BIAS Adjustment **DECK B**

## Setting:

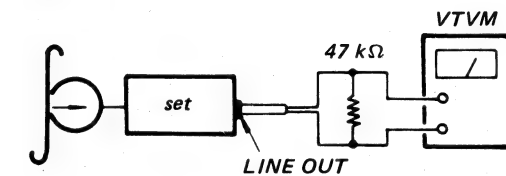
REC LEVEL control: standard record  
(See page 14.)

## Procedure:

1. Mode: record



2. Mode: playback

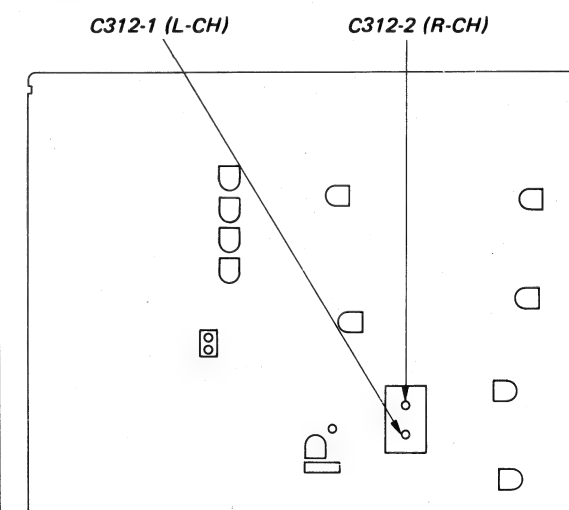


Play back the tape recorded in step 1. If the specification is not satisfied, adjust CT312-1 (L-CH), CT312-2 (R-CH) and repeat steps 1 and 2.

## Specification:

The LINE OUT level of 10 kHz signal relative to that of 315 Hz: -0.5 dB to +0.5 dB.

Adjustment Location: audio board

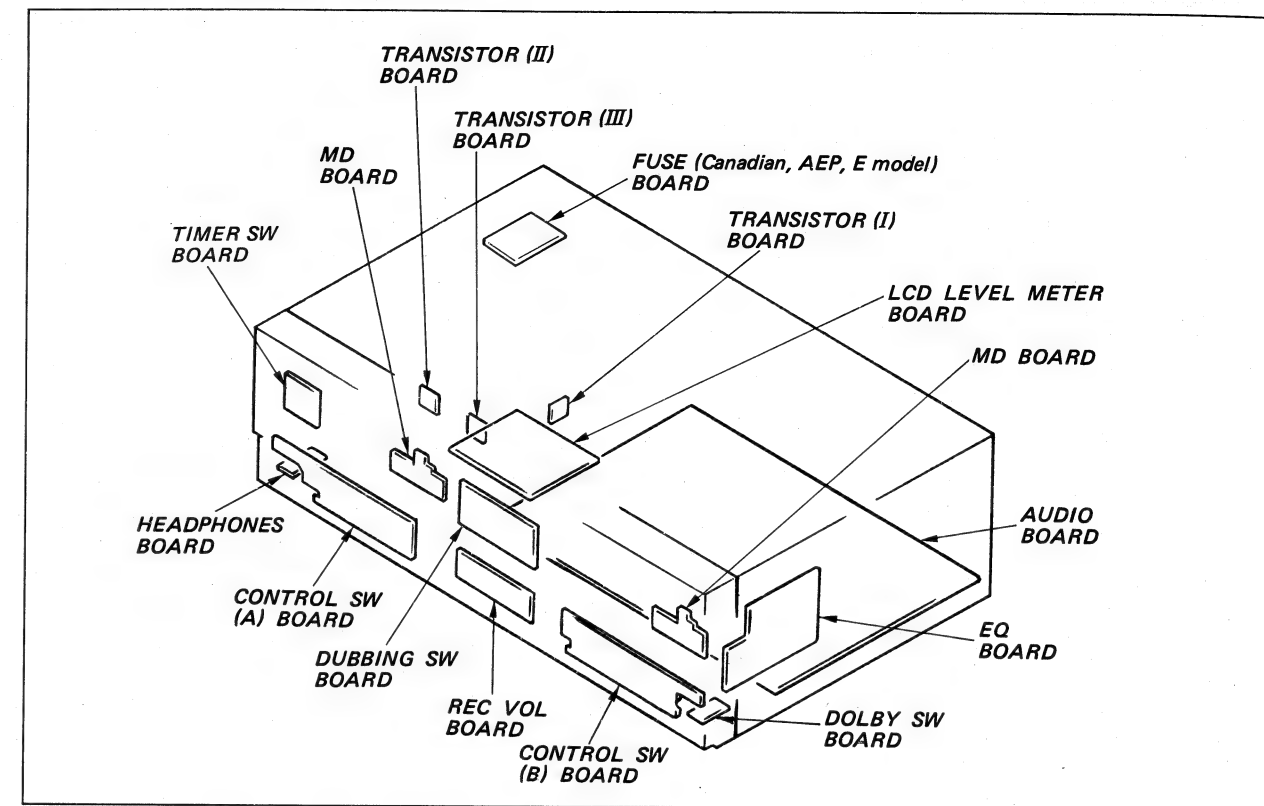




## SECTION 4

### CIRCUIT BOARDS LOCATION

#### 4-1. CIRCUIT BOARDS LOCATION



#### • SEMICONDUCTOR LEAD LAYOUTS

<b>CX20187</b>  (Top view)	<b>M5076-417P</b>  (Top view)	<b>2SA1348</b> <b>2SC634SP</b> <b>2SC3399</b> <b>2SC3402</b>  E C B	<b>2SB1094L</b> <b>2SD1406</b>  B C E	<b>MPG5785X</b>  anode cathode
<b>CXD1017Q</b>  37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	<b>M5218L</b>  1 2 3 4 5 6 7 8	<b>2SA1175</b> <b>2SC2785-E</b>  E C B	<b>2SB734</b>  E C B	<b>MPG3877S</b> <b>MAY3877S</b> <b>MPR3877S</b>  anode cathode
<b>M4066BP</b>  (Top view)	<b>CXA4559P</b> <b>μPC4570C-1</b>  (Top view)	<b>2SA1175</b> <b>2SC2785-E</b>  E C B	<b>1SS132</b> <b>10E2N</b> <b>HZ4CLL</b> <b>HZ6C3L</b>  cathode anode	<b>MAY4868K</b> <b>MVR4868K</b>  anode cathode
<b>M50742-404SP</b>  (Top view)	<b>μPC4570HA</b>  1 2 3 4 5 6 7 8 9	<b>2SB1014</b> <b>2SC2120Y</b> <b>2SD1388</b>  E C B	<b>1SS202-1</b>  cathode anode	

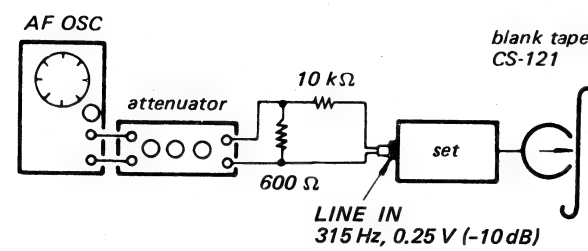
#### Record Level Adjustment **DECK B**

##### Setting:

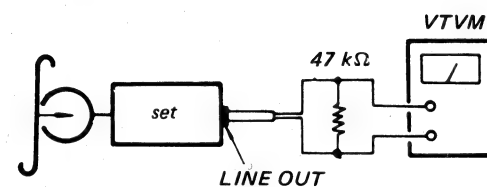
REC LEVEL control: standard record  
(See page 14.)

##### Procedure:

- Mode: record



- Mode: playback

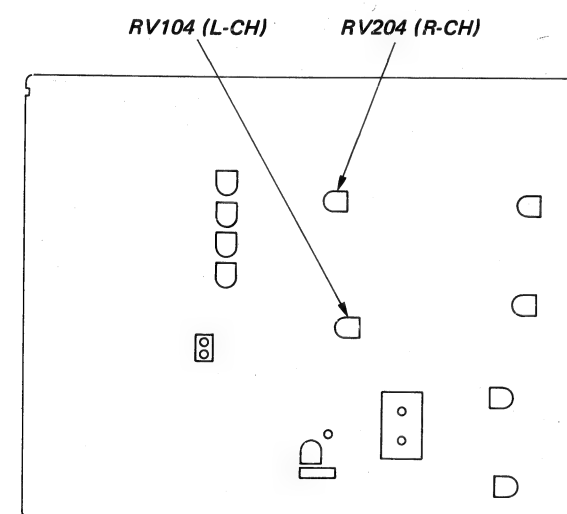


Play back the tape recorded in step 1. If the specification is not satisfied, adjust RV104 (L-CH), RV204 (R-CH) and repeat steps 1 and 2.

##### Specification:

LINE OUT level: 0.41 to 0.46 V  
(-5.5 to -4.5 dB)

##### Adjustment Location: audio board

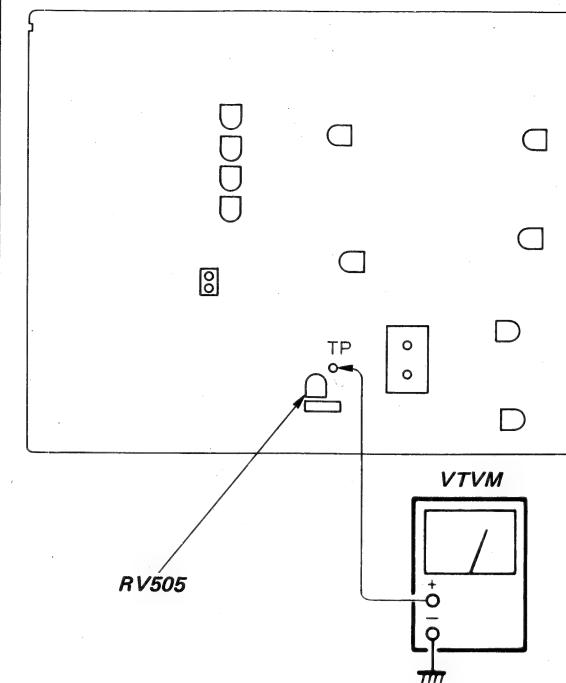


#### Quick Reverse Adjustment **DECK B**

##### Setting:

Direction mode: →

##### [AUDIO BOARD]



##### Procedure:

- Put a tape cassette in the set and put the set into the FWD state.
- Adjust RV505 so that the reading on VTVM is approximately 0.5 V below the maximum voltage value. (Example: 5.5 V - 0.5 V)
- After the adjustment, put the SONY tape (HF C-120) in the set and playback. Confirm that the tape travel stops near the tape-end. (The voltage difference between the leader tape and the magnetic material part is above 2 V.)

# SECTION 5 DIAGRAMS

## 5-1. MOUNTING DIAGRAM — Conductor Side —

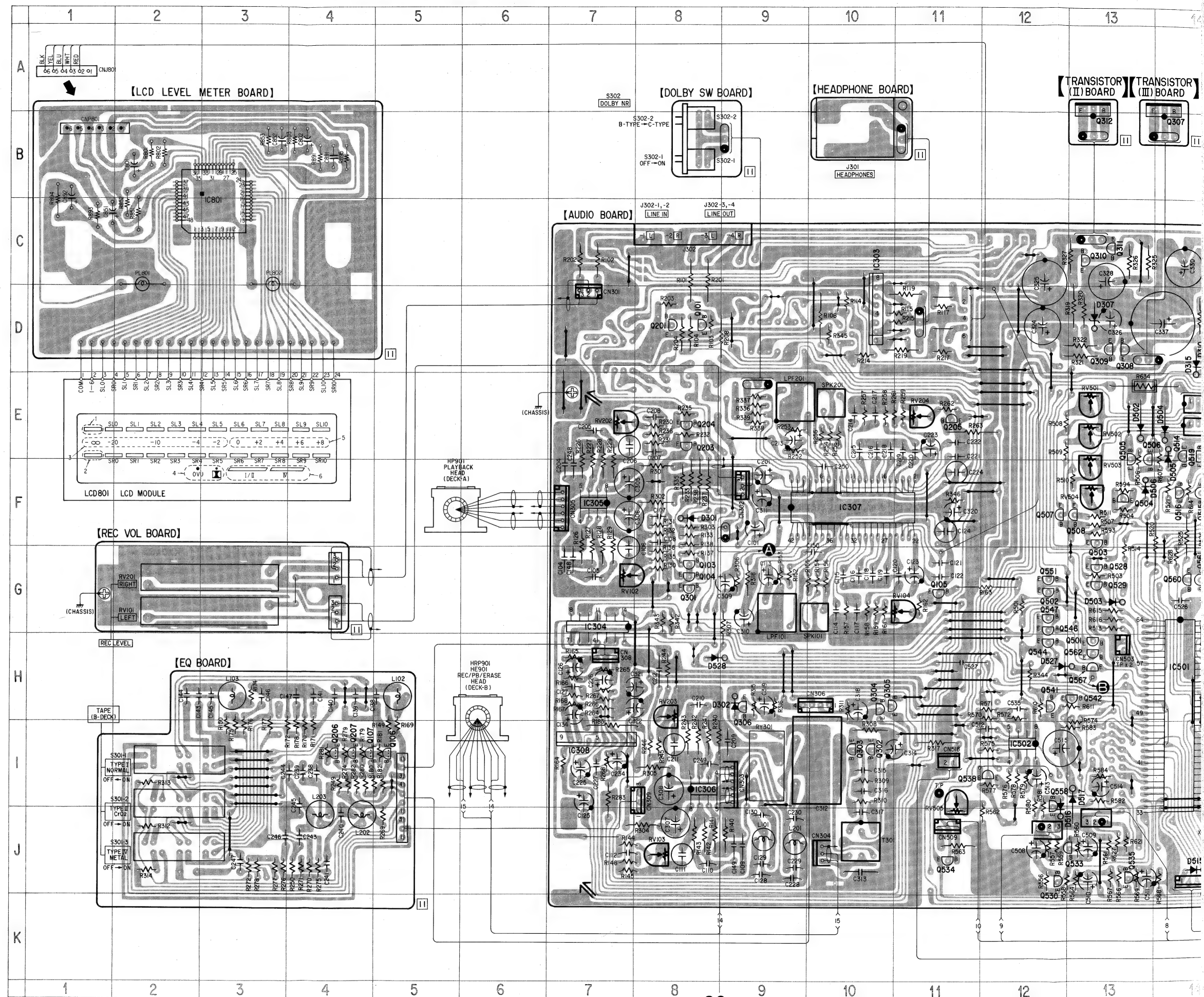
- See page 18 for semiconductor Lead Layouts and Circuit Boards Location.

### SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D301	F-8	D818	E-22	Q507	F-12
D302	H-9	D819	E-21	Q508	F-13
D303	D-15	D820	J-20	Q509	F-15
D304	C-15	D821	H-23	Q510	F-14
D305	C-15	D822	J-20	Q511	F-15
D306	C-15	D823	D-19	Q512	F-15
D307	D-13	D824	D-19	Q513	F-15
D308	D-14	D825	I-19	Q514	E-14
D309	D-15			Q515	F-14
D310	D-14	IC303	C-10	Q516	F-14
D312	E-16	IC304	G-7	Q517	F-14
D313	E-16	IC305	F-7	Q518	E-15
D314	D-14	IC306	I-8	Q519	E-14
D315	D-14	IC307	F-10	Q520	F-15
D316	E-16	IC308	I-7	Q521	F-15
D317	E-16	IC501	H-14	Q522	G-15
D502	E-13	IC502	I-12	Q523	H-15
D503	G-13	IC503	I-15	Q524	G-14
D504	E-14	IC801	C-3	Q525	H-14
D505	F-14			Q526	H-15
D506	F-13	Q101	D-8	Q527	H-14
D507	H-16	Q103	G-8	Q528	G-13
D508	E-15	Q104	G-8	Q529	G-13
D509	H-16	Q105	G-11	Q530	K-12
D510	E-15	Q106	I-5	Q533	J-13
D515	J-14	Q107	I-4	Q534	J-11
D516	J-12	Q201	D-8	Q535	J-13
D517	I-13	Q203	E-8	Q536	J-14
D518	J-16	Q204	E-8	Q538	I-11
D519	J-16	Q205	E-11	Q541	H-12
D521	I-15	Q206	I-4	Q542	H-13
D522	I-15	Q207	I-4	Q543	J-15
D523	H-16	Q301	G-8	Q544	H-12
D526	F-16	Q302	I-10	Q546	G-12
D527	H-12	Q303	I-10	Q547	G-12
D528	H-8	Q304	H-10	Q548	B-27
D529	H-15	Q305	H-10	Q549	G-27
D801	D-20	Q306	I-9	Q550	K-28
D802	D-20	Q307	B-14	Q551	G-12
D804	D-21	Q308	D-13	Q552	H-15
D805	D-20	Q309	D013	Q554	I-15
D806	D-19	Q310	C-13	Q555	J-15
D808	D-21	Q311	C-13	Q556	I-16
D809	H-19	Q312	B-13	Q558	I-12
D810	H-20	Q313	B-15	Q559	G-15
D811	G-21	Q318	D-15	Q560	G-14
D812	G-21	Q501	H-13	Q561	G-14
D813	G-22	Q502	G-12	Q562	H-13
D814	E-19	Q503	G-13	Q564	G-14
D815	E-19	Q504	F-13	Q565	F-16
D816	E-20	Q505	E-13	Q566	F-15
D817	E-21	Q506	E-13	Q567	H-13

#### Note:

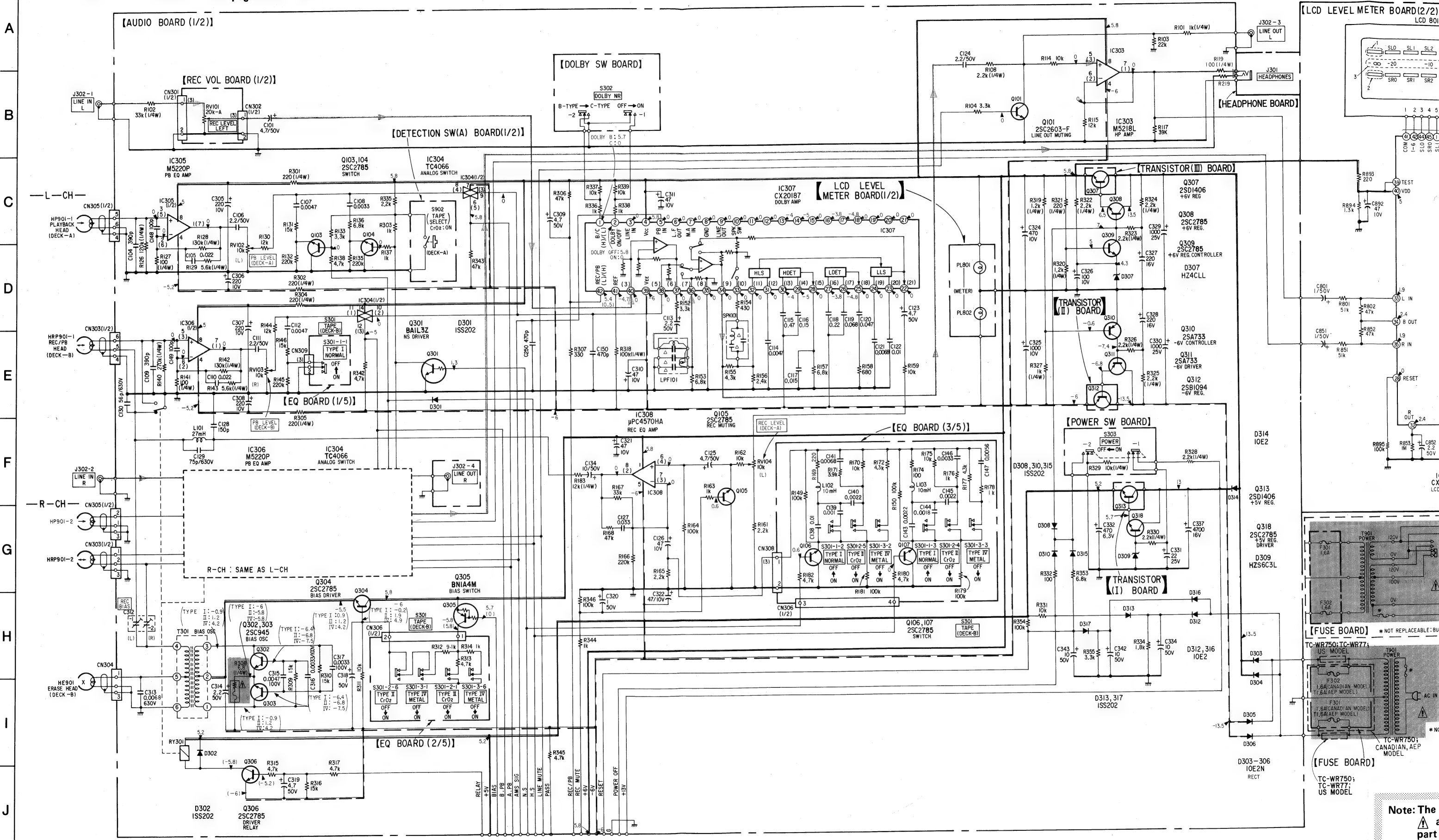
- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : part mounted on the conductor side.





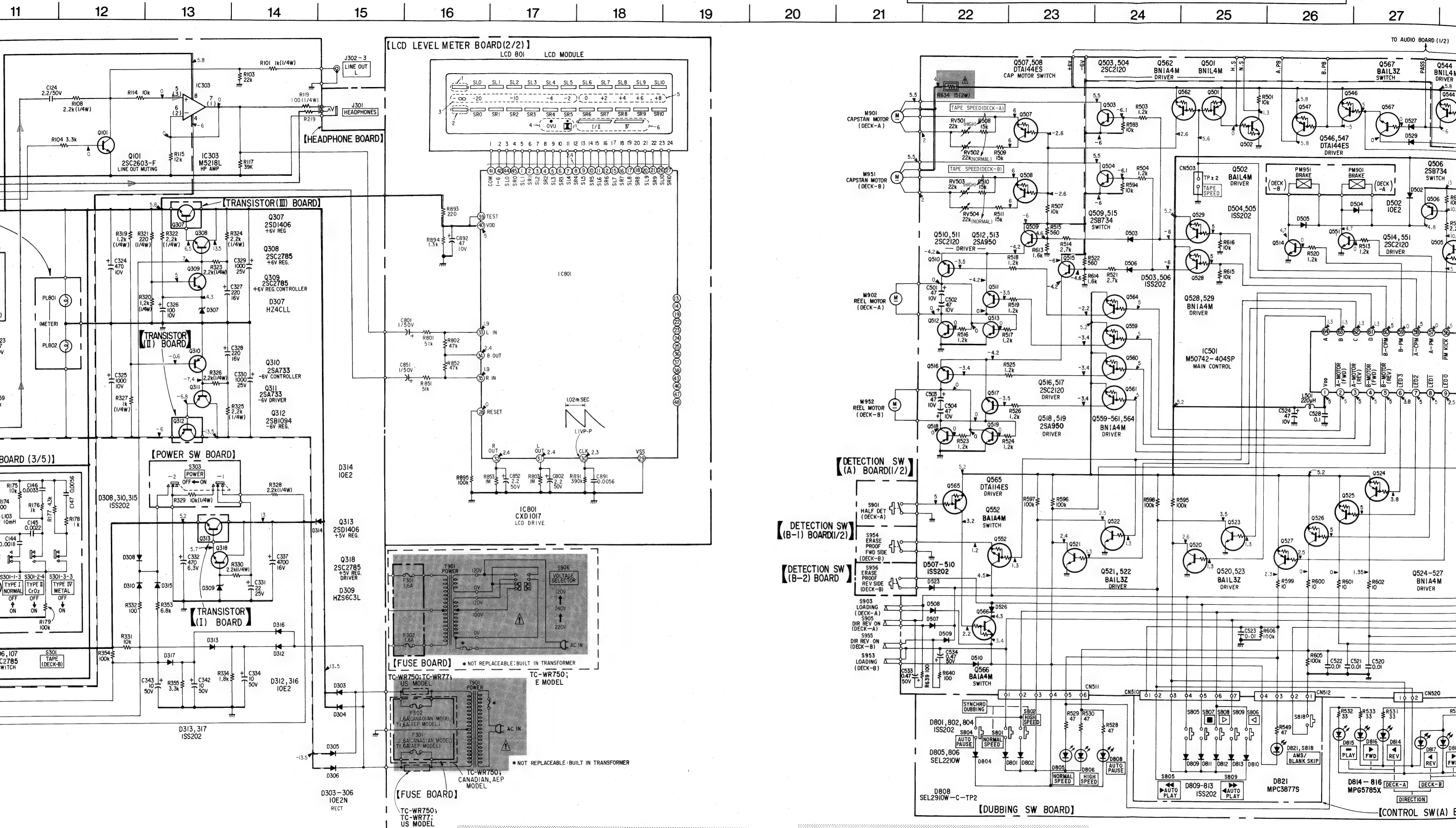


5-2. SCHEMATIC DIAGRAM • See page 28 for notes.



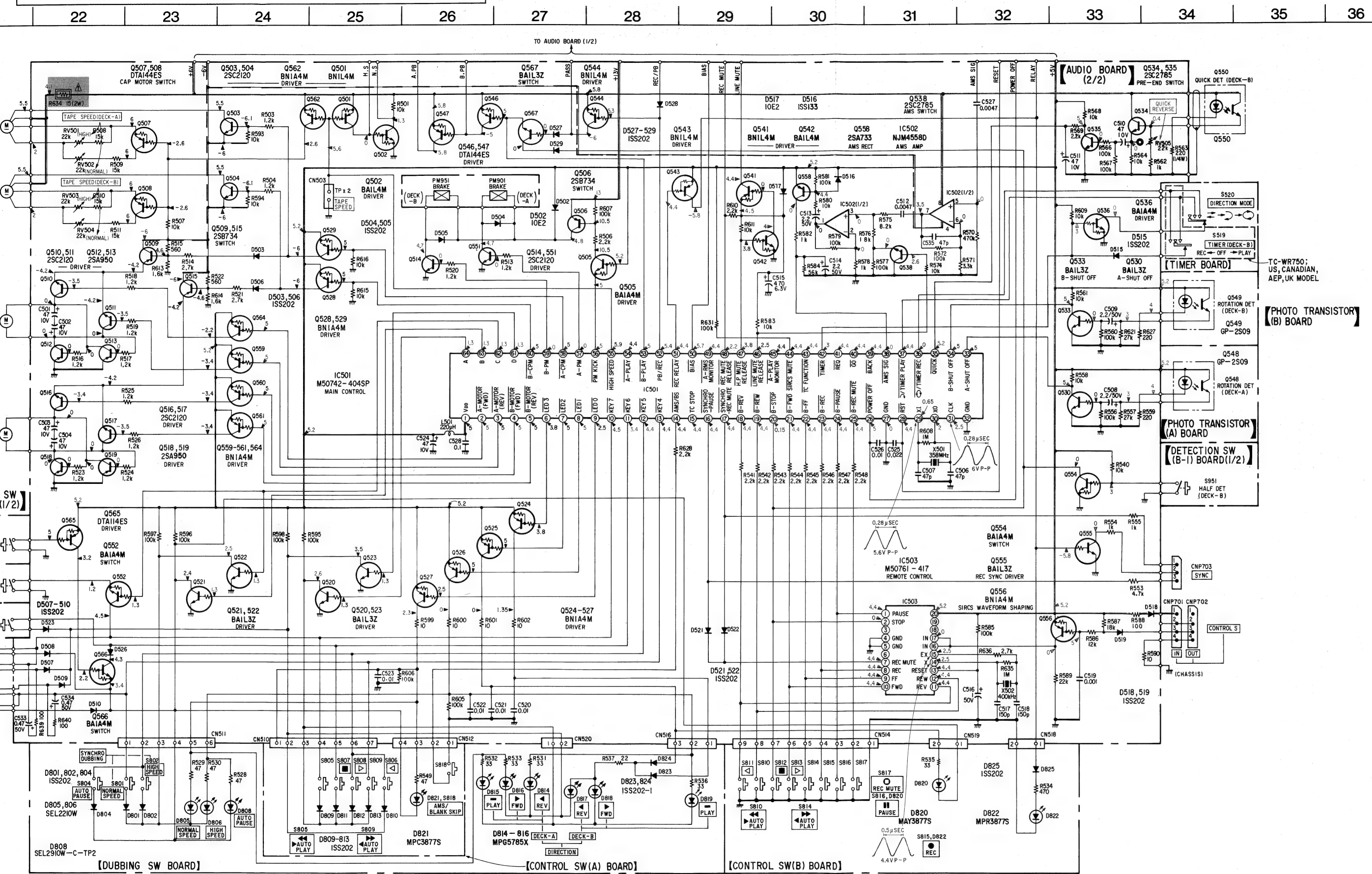
Note: The c  
an  
part



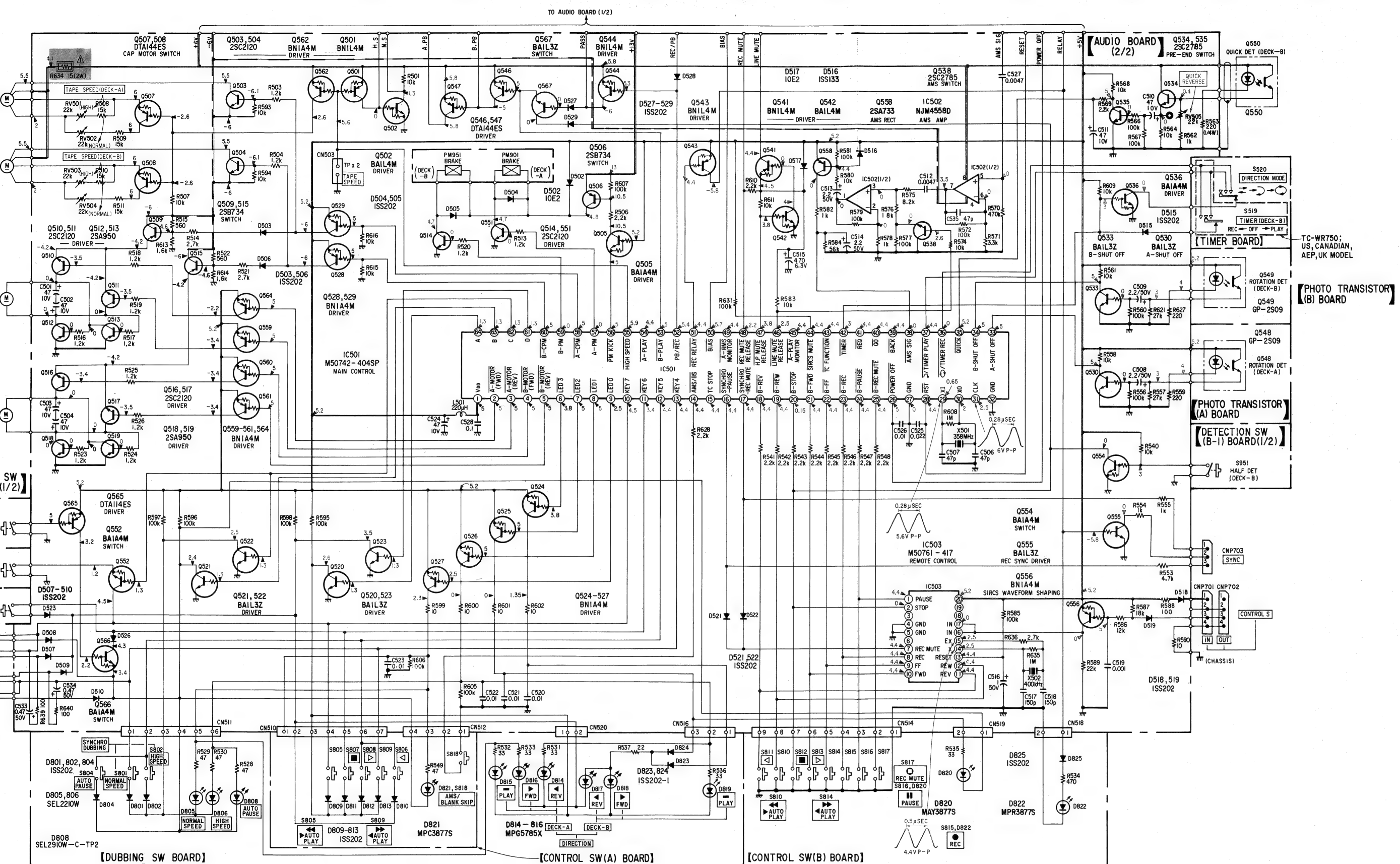


Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



posants identifiés par une trame et une sont critiques pour la sécurité. Ne les que par une pièce portant le numéro



Les composants identifiés par une trame et une  sont critiques pour la sécurité. Ne les retirez que par une pièce portant le numéro



## SECTION 6

## EXPLODED VIEWS AND PARTS LIST

## Note on SCHEMATIC DIAGRAM:

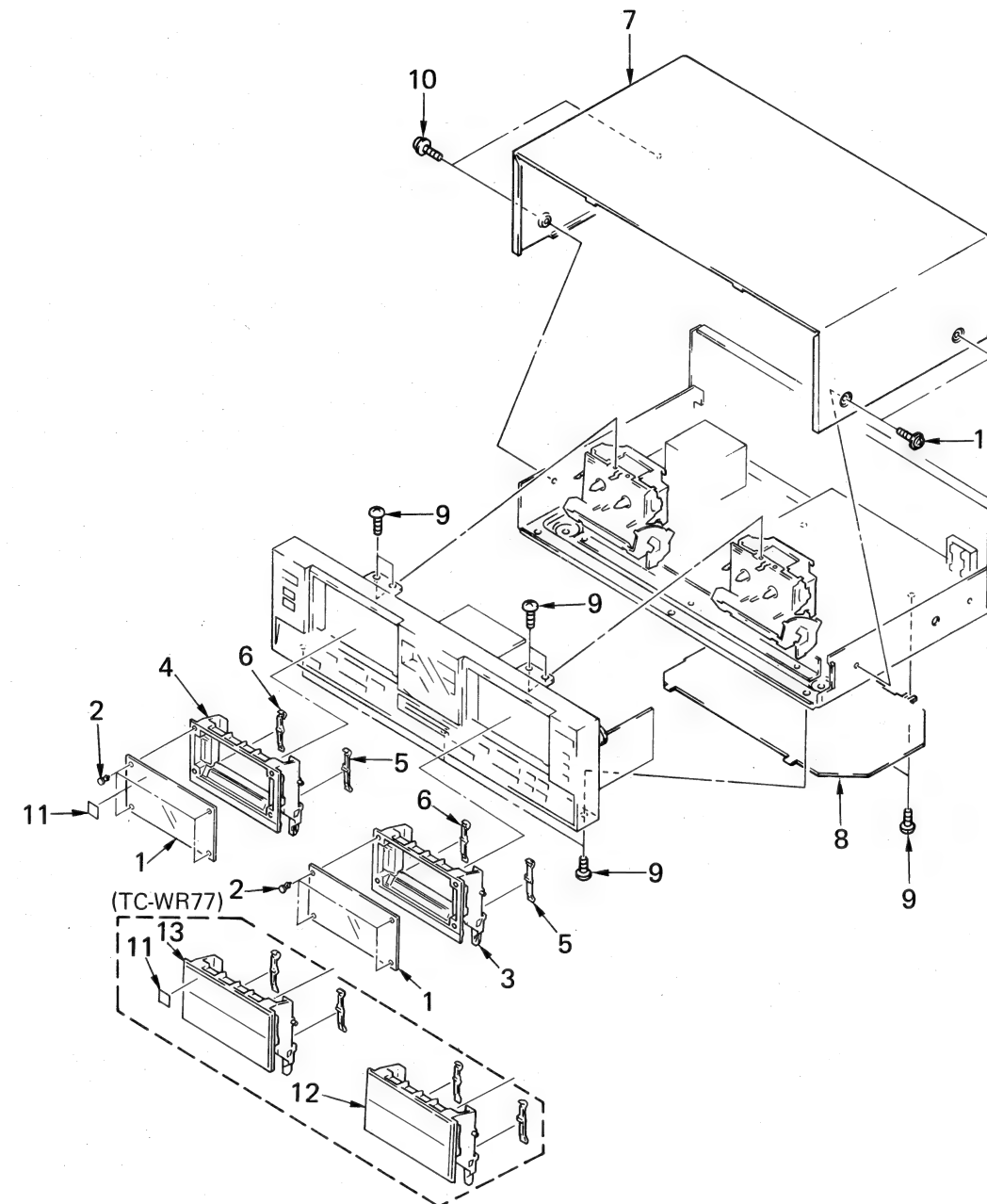
- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- : signal path.
- Components for right channel have same values as for left channel. Reference numbers are coded from 200.
- $\Delta$  : internal component.
- $\square$  : nonflammable resistor.
- $\square$  : fusible resistor.
- : B+ bus.
- : B- bus.
- : adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 k $\Omega$ /V).
- ( ) : REC
- Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken to ground in no-signal mode by using oscilloscope.
- Voltage variations may be noted due to normal production tolerances.
- Switches:

Ref. No.	Switch	Position
S301	TAPE SELECT (DECK-B)	NORMAL
S302-1	DOLBY NR B-TYPE/C-TYPE	B-TYPE
S302-2	DOLBY NR ON/OFF	OFF
S303	POWER	ON
S519	TIMER (DECK-B)	OFF
S520	DIRECTION MODE	
S801	SYNCHRO DUBBING NORMAL SPEED	OFF
S802	SYNCHRO DUBBING HIGH SPEED	OFF
S804	AUTO PAUSE	OFF
S805	◀ DECK-A	OFF
S806	▶ DECK-A	OFF
S807	■ DECK-A	OFF
S808	▶ DECK-A	OFF
S809	▶ DECK-A	OFF
S810	◀ DECK-B	OFF
S811	▶ DECK-B	OFF
S812	■ DECK-B	OFF
S813	▶ DECK-B	OFF
S814	▶ DECK-B	OFF
S815	● DECK-B	OFF
S816	■ DECK-B	OFF
S817	○ DECK-B	OFF
S818	AMS	OFF
S901	DECK-A (HALF DET)	OFF
S902	DECK-A (TAPE SELECT)	NORMAL
S903	DECK-A (LOADING)	OFF
S905	DECK-A (DIR REV)	OFF
S906	VOLTAGE SELECTOR (E Model)	220 V
S951	DECK-B (HALF DET)	OFF
S953	DECK-B (LOADING)	OFF
S954	DECK-B (FWD ERASE PROOF)	OFF
S955	DECK-B (DIR REV)	OFF
S956	DECK-B (REV ERASE PROOF)	OFF

## NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

6-1.

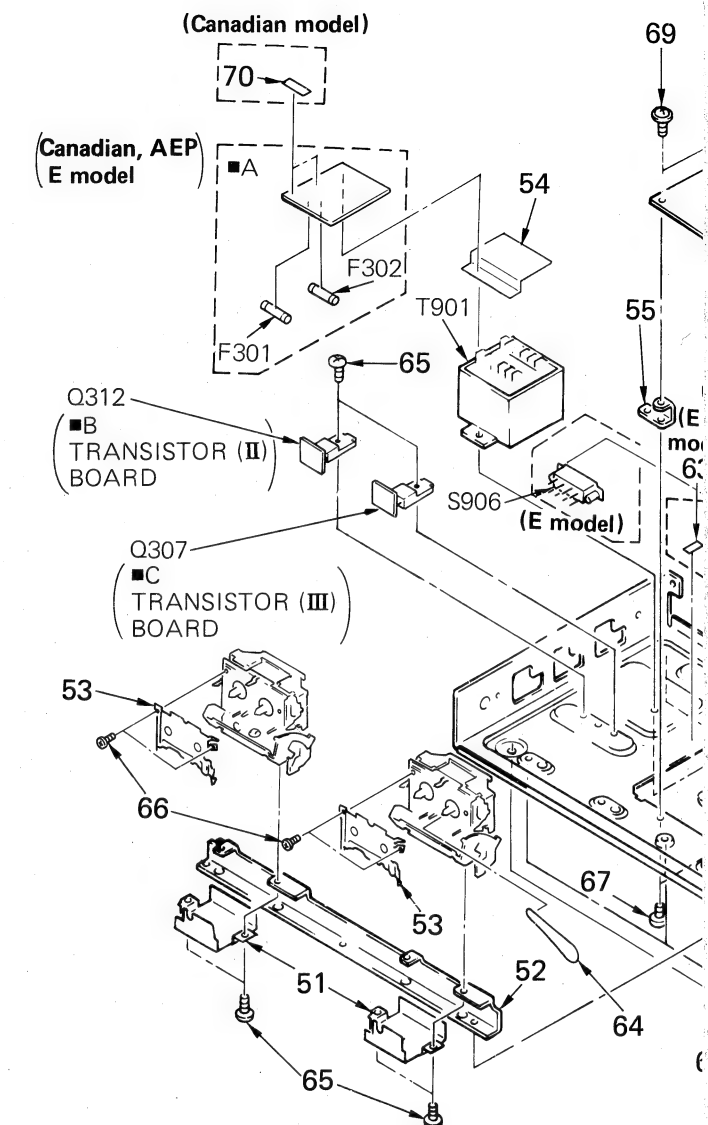


No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	3-332-470-01	(WR750)...WINDOW, CASSETTE		8	*3-332-418-01	PLATE, BOTTOM	
2	*3-337-123-01	PIN, STOPPER, CASSETTE WINDOW		9	7-685-871-01	SCREW +BVT 3X6 (S)	
3	X-3332-441-1	HOLDER (B) ASSY, CASSETTE		10	4-886-821-01	SCREW, M3 CASE	
4	X-3332-440-1	HOLDER (A) ASSY, CASSETTE		11	3-703-713-41	STICKER, SONY SYMBOL (10)	
5	3-307-372-00	SPRING (RIGHT)		12	X-3332-445-1	(WR77)...HOLDER (B) COMPLETE ASSY	
6	3-307-371-00	SPRING (LEFT)		13	X-3332-444-1	(WR77)...HOLDER (A) COMPLETE ASSY	
7	3-332-427-01	CASE					

The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-2.

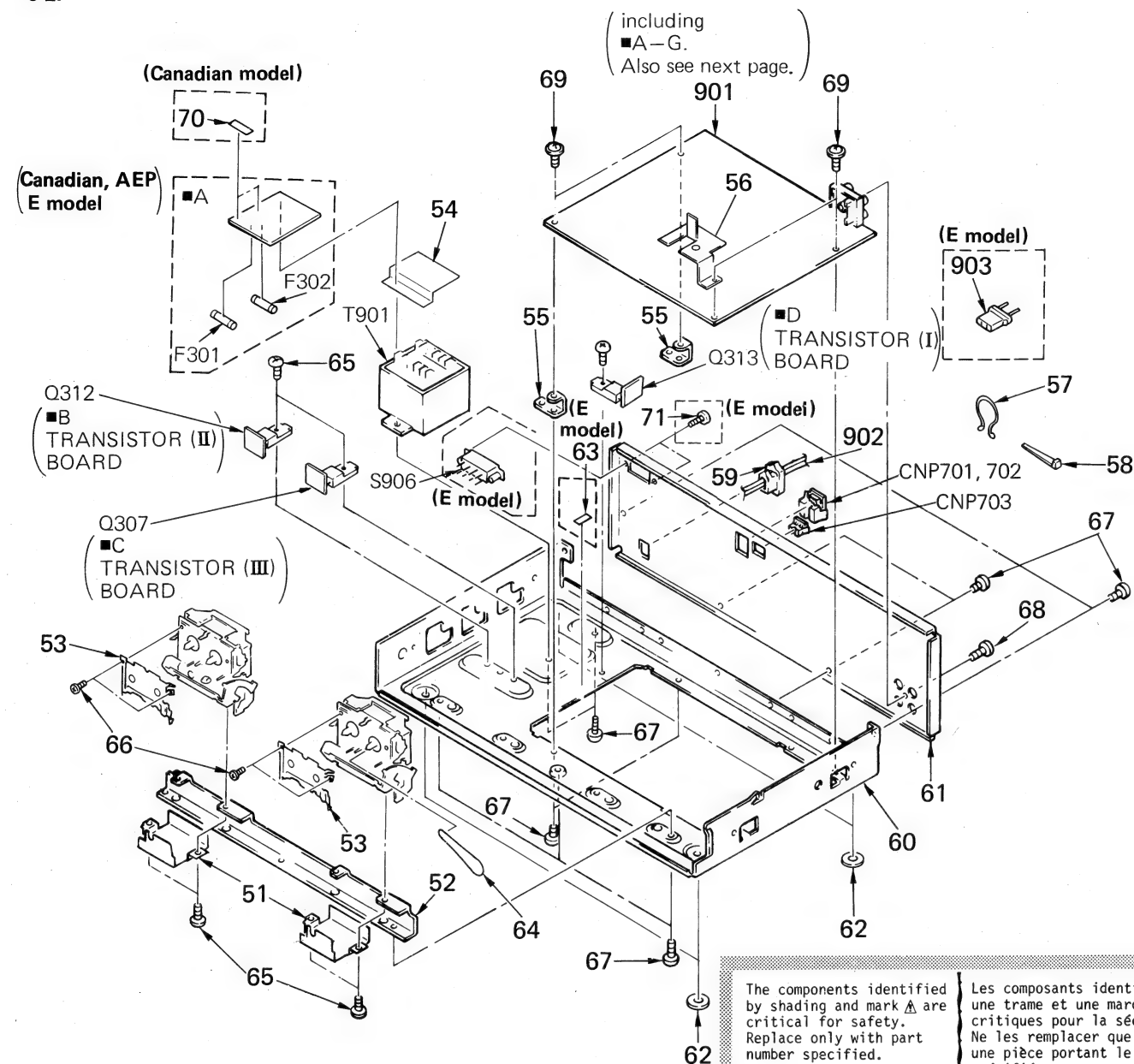


No.	Part No.	Description	Remarks
51	*4-919-325-01	PLATE, SHIELD, HEAD	
52	*3-332-421-01	BRACKET, MD	
53	*3-332-547-01	PLATE, ORNAMENTAL	
54	*3-337-136-01	COVER, TRANSFORMER SAFETY	
55	*3-332-410-01	BRACKET (2), PC BOARD	
56	*3-332-496-01	PLATE, SHIELD	
57	3-701-417-00	PURSE LOCK (11 DIA.)	
58	3-701-748-00	CLAMP	
59	3-703-244-00	(WR750:US,Canadian,AEP,WR77).....BUSHING (2104), CORD	
	3-703-571-00	(WR750:E).....BUSHING (S)(4516), CORD	
60	*3-332-426-01	CHASSIS	
61	*3-332-475-01	(WR750:US,Canadian,WR77)...PLATE, JACK	
	*3-332-475-11	(WR750:AEP).....PLATE, JACK	
	*3-332-475-21	(WR750:E).....PLATE, JACK	

# RTS LIST

identified mark  $\Delta$  are critical for safety. Ne les remplacer que par une pièce portant le numéro spécifié.

6-2.



The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

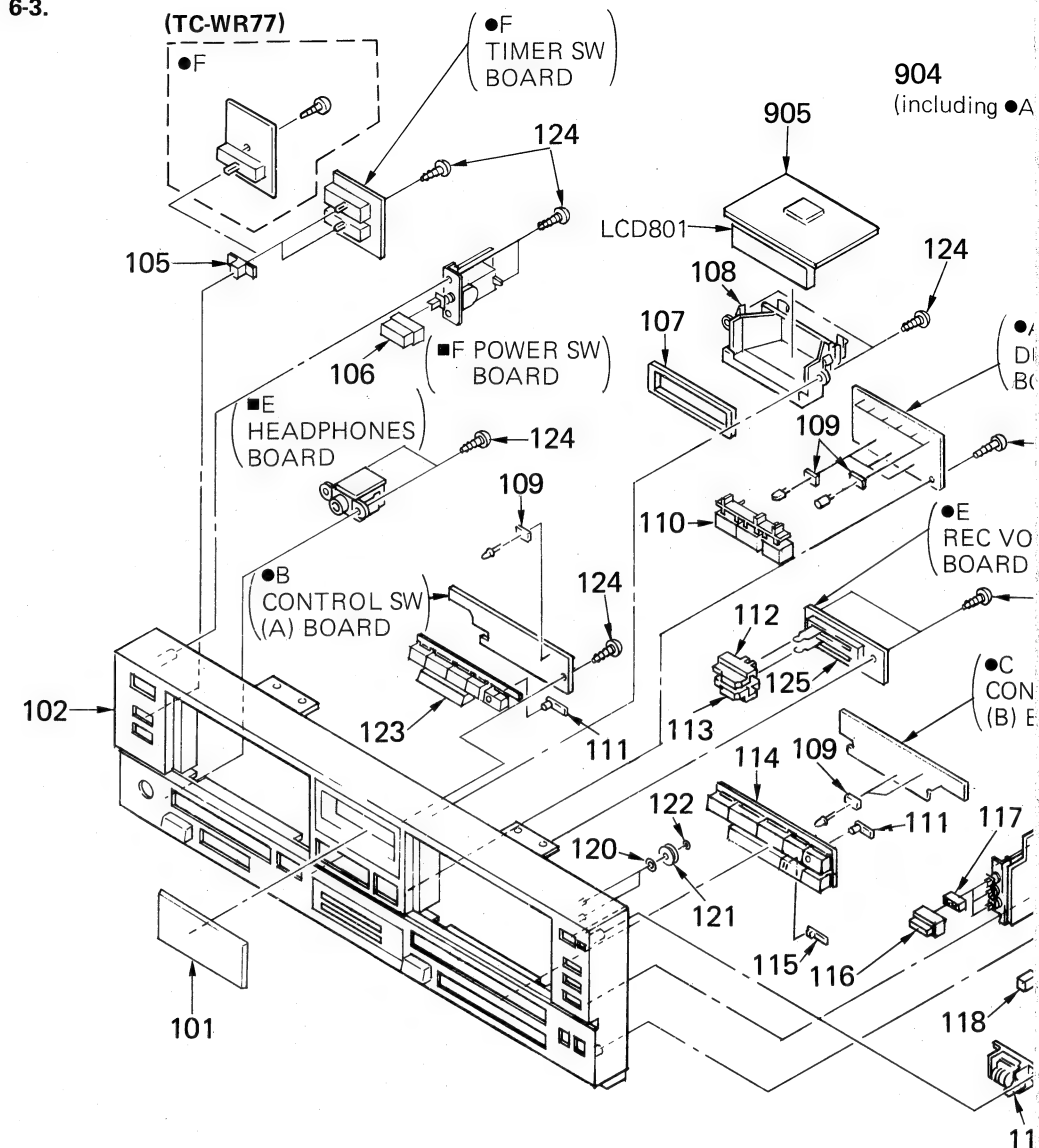
No.	Part No.	Description	Remarks
51	*4-919-325-01	PLATE, SHIELD, HEAD	
52	*3-332-421-01	BRACKET, MD	
53	*3-332-547-01	PLATE, ORNAMENTAL	
54	*3-337-136-01	COVER, TRANSFORMER SAFETY	
55	*3-332-410-01	BRACKET (2), PC BOARD	
56	*3-332-496-01	PLATE, SHIELD	
57	3-701-417-00	PURSE LOCK (11 DIA.)	
58	3-701-748-00	CLAMP	
59	3-703-244-00	(WR750:US,Canadian,AEP,WR77).....BUSHING (2104), CORD	
	3-703-571-00	(WR750:E).....BUSHING (S)(4516), CORD	
60	*3-332-426-01	CHASSIS	
61	*3-332-475-01	(WR750:US,Canadian,WR77)...PLATE, JACK	
	*3-332-475-11	(WR750:AEP).....PLATE, JACK	
	*3-332-475-21	(WR750:E).....PLATE, JACK	

No.	Part No.	Description	Remarks
62	3-576-731-00	FELT (H)	
63	3-703-044-26	(WR750:Canadian)...LABEL CAUTION	
64	3-530-181-XX	BELT, DETCTING	
65	7-685-871-01	SCREW +BVTT 3X6 (S)	
66	7-621-255-10	SCREW +B 2X3	
67	7-685-752-04	SCREW +BVTT 3X8 (S)	
68	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
69	7-687-511-31	SCREW, TOTSU PTTWH 3X8	
70	3-701-946-22	(WR750:Canadian)...LABEL FUSE	
71	7-685-534-19	(WR750:E)...SCREW +BVTT 2.6X8 TYPE 2	
901	*A-2056-352-A	MOUNTED PCB, AUDIO	

S906	$\Delta$ 1-570-307-11	(WR750:E)...SWITCH, VOLTAGE CHANGE
902	$\Delta$ 1-551-510-11	(WR750:US,Canadian,WR77)...CORD, POWER
	$\Delta$ 1-551-908-11	(WR750:AEP).....CORD, POWER EULO PLUG
T901	$\Delta$ 1-448-376-11	(WR750:US,Canadian,WR77).....TRANSFORMER, POWER
	$\Delta$ 1-448-377-11	(WR750:AEP).....TRANSFORMER, POWER
	$\Delta$ 1-448-378-11	(WR750:E).....TRANSFORMER, POWER

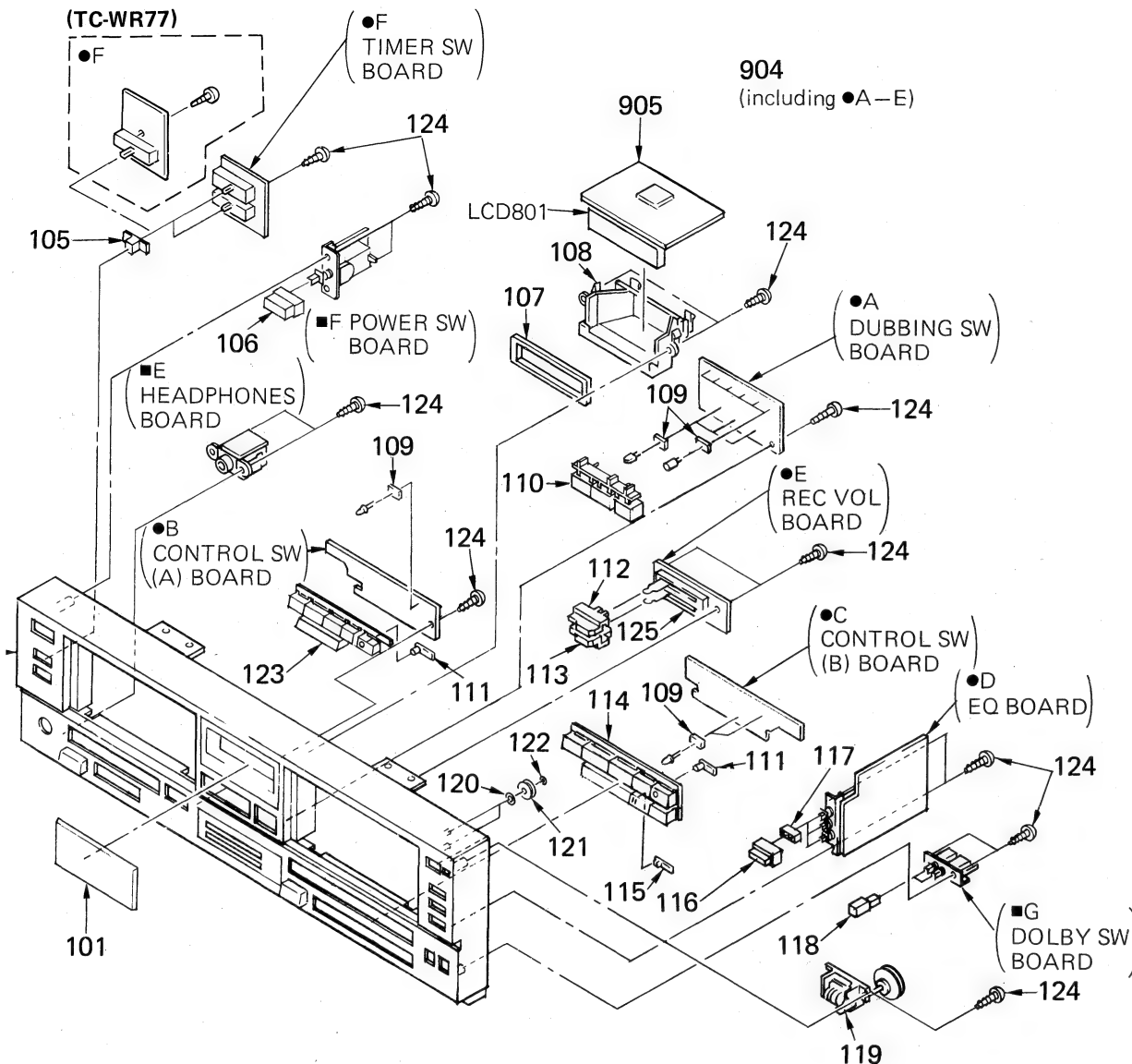
Description	Remarks
18-01 PLATE, BOTTOM	
71-01 SCREW +BVTT 3X6 (S)	
21-01 SCREW, M3 CASE	
13-41 STICKER, SONY SYMBOL (10)	
445-1 (WR77)....HOLDER (B) COMPLETE ASSY	
444-1 (WR77)....HOLDER (A) COMPLETE ASSY	

6-3.



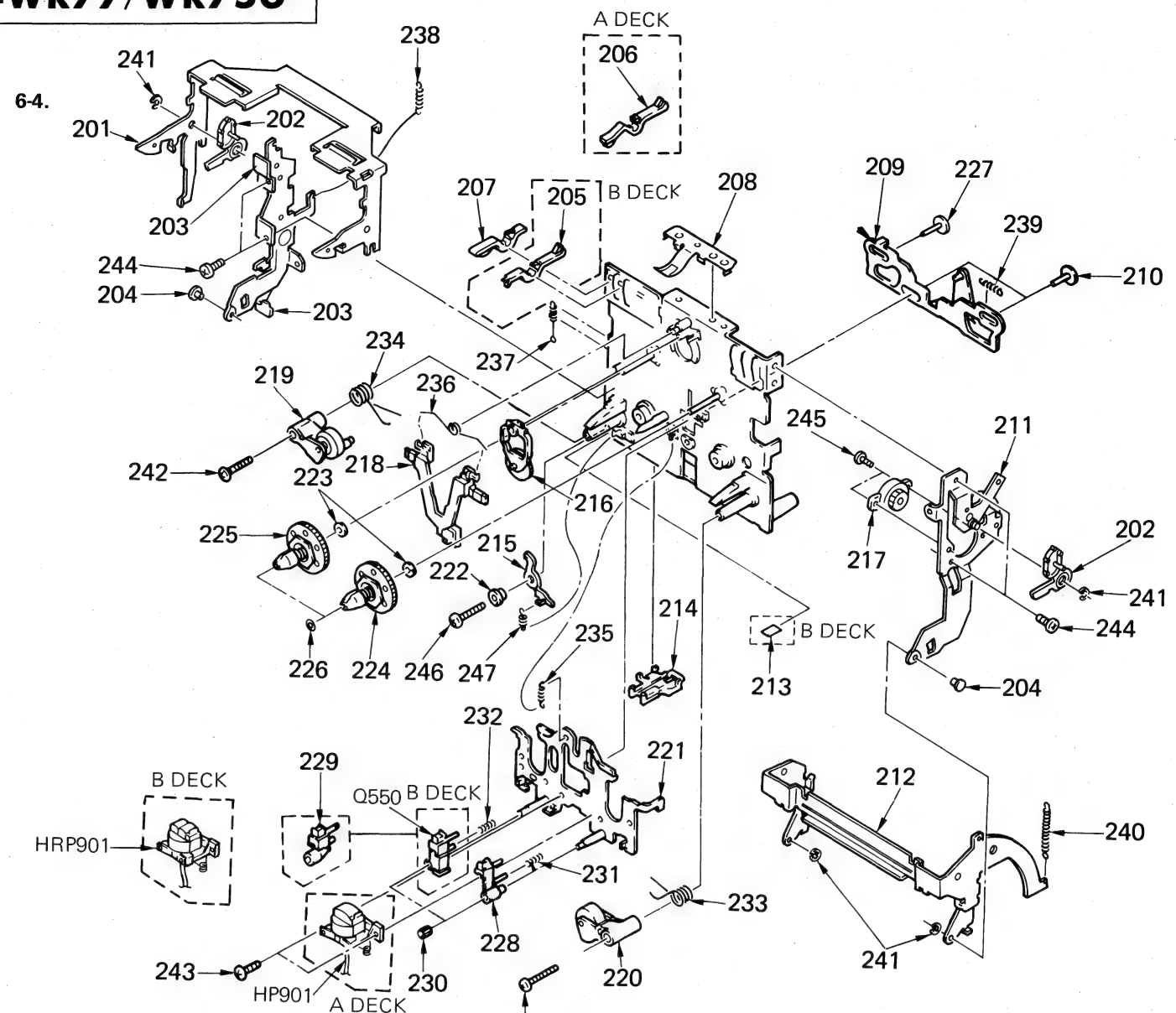
No.	Part No.	Description	Remarks
101	3-332-469-01	WINDOW, METER	
102	X-3332-443-1	PANEL ASSY, FRONT	
105	3-307-538-21	KNOB, SWITCH, TIMER	
106	4-917-460-01	KNOB, POWER	
107	3-332-449-01	CUSHION, DISPLAY	
108	3-332-423-11	HOUSE, LAMP	
109	*4-901-657-00	SPACER (A), LED	
110	X-3332-439-1	BUTTON ASSY, DUBBING	
111	3-332-412-01	WINDOW, REC	
112	3-323-446-01	KNOB (LEFT), CONTROL	
113	3-323-447-01	KNOB (RIGHT), CONTROL	
114	X-3332-438-1	BUTTON (B) ASSY, CONTROL	

No.	Part No.	Description	Remarks
115	*3-332-411-01	WINDOW, PAUSE	
116	3-318-909-11	KNOB, PUSH	
117	*4-864-307-00	RING	
118	4-855-804-11	KNOB, SQUARE	
119	1-548-596-11	COUNTER, TAPE (M)	
120	3-701-437-11	WASHER	
121	3-549-452-00	PULLEY, SHUT-OFF	
122	3-558-708-11	WASHER, STOPPER	
123	X-3332-437-1	BUTTON (A) ASSY	
124	7-685-646-79	SCREW +BVTP 3X8	
125	*3-332-402-01	PLATE (A), SHIEL	
904	*1-621-849-11	PC BOARD, ETC	
905	*1-618-741-11	PC BOARD, LCD LE	



No.	Description	Remarks
-469-01	WINDOW, METER	
-2-443-1	PANEL ASSY, FRONT	
-538-21	KNOB, SWITCH, TIMER	
-460-01	KNOB, POWER	
-449-01	CUSHION, DISPLAY	
-423-11	HOUSE, LAMP	
-657-00	SPACER (A), LED	
-2-439-1	BUTTON ASSY, DUBBING	
-412-01	WINDOW, REC	
-446-01	KNOB (LEFT), CONTROL	
-447-01	KNOB (RIGHT), CONTROL	
-2-438-1	BUTTON (B) ASSY, CONTROL	

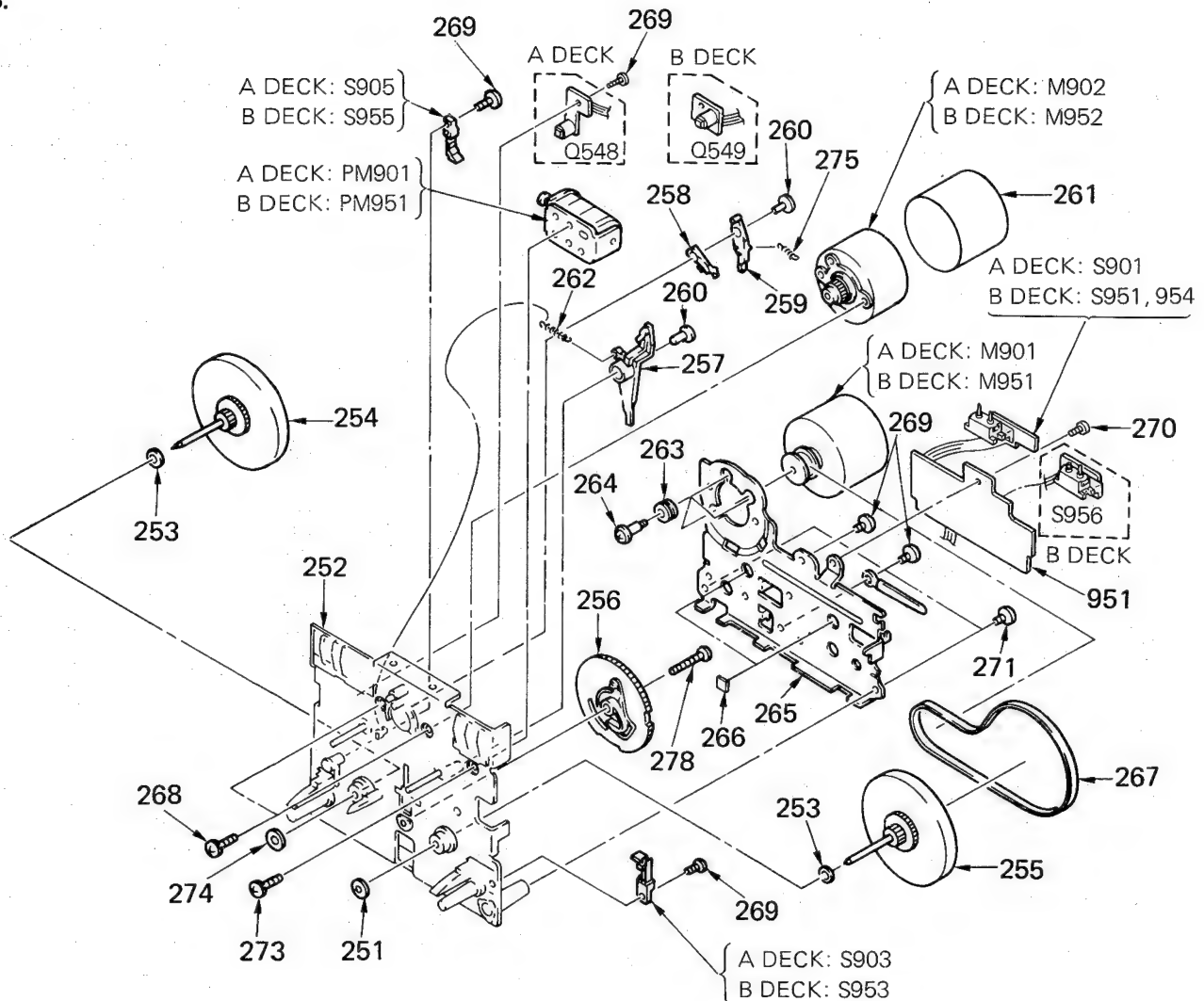
No.	Part No.	Description	Remarks
115	*3-332-411-01	WINDOW, PAUSE	
116	3-318-909-11	KNOB, PUSH	
117	*4-864-307-00	RING	
118	4-855-804-11	KNOB, SQUARE	
119	1-548-596-11	COUNTER, TAPE (MIDDLE TYPE)	
120	3-701-437-11	WASHER	
121	3-549-452-00	PULLEY, SHUT-OFF	
122	3-558-708-11	WASHER, STOPPER	
123	X-3332-437-1	BUTTON (A) ASSY, CONTROL	
124	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
125	*3-332-402-01	PLATE (A), SHIELD	
904	*1-621-849-11	PC BOARD, ETC	
905	*1-618-741-11	PC BOARD, LCD LEVEL METER	



No.	Part No.	Description	Remarks
201	*3-391-180-01	ARM, EJECT	
202	3-391-185-01	LEVER, STOP	
203	*X-3391-152-1	ARM ASSY, EJECT	
204	3-391-183-01	SHAFT (B), HOLDER FULCRUM	
205	3-391-188-01	LEVER, REC	
206	*3-391-155-01	LEVER, CHROME INSPECTION	
207	3-391-178-01	LEVER, PACK	
208	3-391-177-01	SPRING	
209	X-3391-112-1	PLATE ASSY, SLIDE	
210	3-391-143-01	CAP	
211	*X-3391-150-1	BKT ASSY, DAMPER	
212	*3-391-182-01	HOLDER, CASSETTE	
213	3-391-162-01	REFLECTOR	
214	3-391-137-01	HOLDER, REED	
215	3-391-121-01	ARM, EJECT SAFETY	
216	X-3391-111-1	IDLER ASSY	
217	X-3391-151-1	DAMPER ASSY	
218	X-3391-108-1	BRAKE ASSY	
219	X-3391-105-1	PINCH ROLLER ASSY	
220	X-3391-104-1	PINCH ROLLER ASSY	
221	X-3391-103-1	HEAD ASSY, PLATE	
222	3-391-120-01	CALLOR	
223	3-701-437-11	WASHER	
224	X-3391-106-1	REEL ASSY (DECK-B)	
	X-3391-107-1	REEL ASSY (DECK-A)	

No.	Part No.	Description	Remarks
225	X-3391-106-1	REEL ASSY (DECK-A)	
	X-3391-142-1	REEL ASSY (DECK-B)	
226	3-701-436-11	WASHER, 1.6	
227	3-391-126-01	CAP	
228	3-391-111-01	GUIDE, TAPE	
229	3-391-156-01	HOLDER, SENSOR (DECK-A)	
230	3-391-110-01	NUT, ADJUSTMENT	
231	3-391-112-01	SPRING (RIGHT)	
232	3-391-113-01	SPRING (LEFT)(DECK-A)	
	3-391-187-01	SPRING (LEFT)(DECK-B)	
233	3-391-115-01	SPRING (RIGHT)	
234	3-391-116-01	SPRING (LEFT)	
235	3-391-114-01	SPRING	
236	3-391-124-01	SPRING	
237	3-391-139-01	SPRING	
238	3-391-181-01	SP, LEVER RETURN	
239	3-391-127-01	SPRING	
240	3-391-184-01	SPRING	
241	7-624-105-04	STOP RING 2.3, TYPE -E	
242	7-685-107-19	SCREW +P 2X12 TYPE2 SLIT	
243	3-391-109-01	SCREW, WASHER	
244	7-685-790-04	SCREW +PTT 2.6X4 (S)	
245	7-685-780-04	SCREW +PTT 2X3 (S)	
246	7-685-105-19	SCREW +P 2X8 TYPE2 SLIT	
247	3-391-122-01	SPRING (A)	
HP901	X-3391-102-1	HEAD ASSY, ROTARY	
HRP901	X-3391-123-1	HEAD ASSY, ROTARY	

6-5.



No.	Part No.	Description	Remarks
251	3-391-119-01	SEAL, WASHER OIL	
252	X-3391-110-1	CHASSIS ASSY	
253	3-701-438-11	WASHER, 2.5	
254	X-3391-125-1	ASSY F/W	
255	X-3391-149-1	ASSY F/W	
256	3-391-128-01	GEAR (B), CAM	
257	X-3391-114-1	ARM ASSY, PLAY	
258	3-391-141-01	ARM (A)	
259	3-391-142-01	ARM (B)	
260	3-391-126-01	CAP	
261	3-391-132-01	PLATE, SHIELD	
262	3-391-133-01	SPRING	
263	3-391-138-01	MOTOR, CUSHION	
264	3-391-147-01	SCREW, MOTOR FITTING	
265	*3-391-130-01	BRACKET (B), F/W	
266	3-391-129-01	SPACER	
267	3-391-134-01	BELT, MAIN	
268	3-391-118-01	SCREW, WASHER	
269	7-685-104-19	SCREW +P 2X6 TYPE2 SLIT	
270	7-685-750-04	SCREW +PTT 3X5 (S)	
271	7-685-131-19	SCREW +P 2.6X4 TYPE2 NON-SLIT	

No.	Part No.	Description	Remarks
272	7-685-107-19	SCREW +P 2X12 TYPE2 SLIT	
273	7-628-253-90	SCREW +PS 2.6X4	
274	3-391-117-01	SEAL, WASHER OIL	
275	3-391-140-01	SPRING (A)	
951	1-589-049-11	BLOCK, PC BOARD (DECK-B)	
	3-391-179-01	BLOCK, PC BOARD (DECK-A)	
M901	X-3391-117-1	MOTOR ASSY, CAPSTAN	
M902	X-3391-118-1	MOTOR ASSY, REEL	
M951	X-3391-117-1	MOTOR ASSY, CAPSTAN	
M952	X-3391-118-1	MOTOR ASSY, REEL	
PM901	1-454-428-11	SOLENOID, PLUNGER	
PM951	1-454-428-11	SOLENOID, PLUNGER	
S901	1-570-720-11	SWITCH, PUSH (1 KEY)(DECK-A HALF DET)	
S903	1-570-719-11	SWITCH, LEAF (DECK-A LOADING)	
S905	1-570-721-11	SWITCH, LEAF (DECK-A REV ON)	
S951	1-570-722-11	SWITCH, PUSH (1 KEY)(DECK-B HERF DET)	
S953	1-570-719-11	SWITCH, LEAF (DECK-B LOADING)	
S954	1-570-720-11	SWITCH, PUSH (1 KEY)(DECK-B ERASE PROOF)	
S955	1-570-721-11	SWITCH, LEAF (DECK-B REV ON)	
S956	1-570-720-11	SWITCH, PUSH (1 KEY)(DECK-B ERASE PROOF)	

## SECTION 7 ELECTRICAL PARTS LIST

### NOTE:

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

### CAPACITORS:

MF:  $\mu$ F, PF:  $\mu$ F.

### RESISTORS

- All resistors are in ohms.
- F: nonflammable

### COILS

MMH: mH, UH:  $\mu$ H

### SEMICONDUCTORS

In each case, U:  $\mu$ , for example:

UA....:  $\mu$ A...., UPA....:  $\mu$ PA...., UPC....:  $\mu$ PC, UPD....:  $\mu$ PD....

The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

### ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	*A-2056-352-A	MOUNTED PCB, AUDIO
902	$\Delta$ 1-551-510-11	(WR750:US,Canadian,WR77)...CORD, POWER
	$\Delta$ 1-551-908-11	(WR750:AEP).....CORD, POWER EULO PLUG
904	*1-621-849-11	PC BOARD, ETC
905	*1-618-741-11	PC BOARD, LCD LEVEL METER
951	1-589-049-11	BLOCK, PC BOARD (DECK-B)
	3-391-179-01	BLOCK, PC BOARD (DECK-A)
C101	1-124-927-11	ELECT 4.7MF 20% 50V
C104	1-162-289-31	CERAMIC 390PF 10% 50V
C105	1-136-157-00	FILM 0.022MF 5% 50V
C106	1-124-183-00	ELECT 2.2MF 20% 50V
C107	1-110-203-00	MYLAR 0.0047MF 5% 50V
C108	1-161-327-00	CERAMIC 0.0033MF 30% 16V
C109	1-162-289-31	CERAMIC 390PF 10% 50V
C110	1-136-157-00	FILM 0.022MF 5% 50V
C111	1-124-183-00	ELECT 2.2MF 20% 50V
C112	1-161-377-00	CERAMIC 0.0047MF 30% 16V
C113	1-124-925-11	ELECT 2.2MF 20% 50V
C114	1-110-203-00	MYLAR 0.0047MF 5% 50V
C115	1-136-173-00	FILM 0.47MF 5% 50V
C116	1-136-167-00	FILM 0.15MF 5% 50V
C117	1-136-155-00	FILM 0.015MF 5% 50V
C118	1-136-169-00	FILM 0.22MF 5% 50V
C119	1-136-163-00	FILM 0.068MF 5% 50V
C120	1-136-161-00	FILM 0.047MF 5% 50V
C121	1-130-481-00	MYLAR 0.0068MF 5% 50V
C122	1-136-153-00	FILM 0.01MF 5% 50V
C123	1-124-927-11	ELECT 4.7MF 20% 50V
C124	1-124-183-00	ELECT 2.2MF 20% 50V
C125	1-124-927-11	ELECT 4.7MF 20% 50V
C126	1-124-892-11	ELECT 47MF 20% 10V
C127	1-136-159-00	FILM 0.033MF 5% 50V
C128	1-162-284-31	CERAMIC 150PF 10% 50V
C129	1-136-273-91	FILM 75PF 5% 630V
C130	1-136-271-00	FILM 56PF 5% 630V
C134	1-124-907-00	ELECT 10MF 20% 50V
C138	1-136-153-00	FILM 0.01MF 5% 50V
C139	1-130-471-00	MYLAR 0.001MF 5% 50V
C140	1-130-475-00	MYLAR 0.0022MF 5% 50V
C141	1-130-481-00	MYLAR 0.0068MF 5% 50V
C143	1-130-475-00	MYLAR 0.0022MF 5% 50V
C144	1-130-474-00	MYLAR 0.0018MF 5% 50V
C145	1-130-475-00	MYLAR 0.0022MF 5% 50V
C146	1-110-201-00	MYLAR 0.0033MF 5% 50V
C147	1-130-480-00	MYLAR 0.0056MF 5% 50V
C148	1-162-282-31	CERAMIC 100PF 10% 50V

### ELECTRICAL PARTS

Ref.No.	Part No.	Description
C149	1-162-282-31	CERAMIC 100PF 10% 50V
C150	1-162-290-31	CERAMIC 470PF 10% 50V
C201	1-124-927-11	ELECT 4.7MF 20% 50V
C204	1-162-289-31	CERAMIC 390PF 10% 50V
C205	1-136-157-00	FILM 0.022MF 5% 50V
C206	1-124-183-00	ELECT 2.2MF 20% 50V
C207	1-110-203-00	MYLAR 0.0047MF 5% 50V
C208	1-161-327-00	CERAMIC 0.0033MF 30% 16V
C209	1-162-289-31	CERAMIC 390PF 10% 50V
C210	1-136-157-00	FILM 0.022MF 5% 50V
C211	1-124-183-00	ELECT 2.2MF 20% 50V
C212	1-161-377-00	CERAMIC 0.0047MF 30% 16V
C213	1-124-925-11	ELECT 2.2MF 20% 50V
C214	1-110-203-00	MYLAR 0.0047MF 5% 50V
C215	1-136-173-00	FILM 0.47MF 5% 50V
C216	1-136-167-00	FILM 0.15MF 5% 50V
C217	1-136-155-00	FILM 0.015MF 5% 50V
C218	1-136-169-00	FILM 0.22MF 5% 50V
C219	1-136-163-00	FILM 0.068MF 5% 50V
C220	1-136-161-00	FILM 0.047MF 5% 50V
C221	1-130-481-00	MYLAR 0.0068MF 5% 50V
C222	1-136-153-00	FILM 0.01MF 5% 50V
C223	1-124-927-11	ELECT 4.7MF 20% 50V
C224	1-124-183-00	ELECT 2.2MF 20% 50V
C225	1-124-927-11	ELECT 4.7MF 20% 50V
C226	1-124-892-11	ELECT 47MF 20% 10V
C227	1-136-159-00	FILM 0.033MF 5% 50V
C228	1-162-284-31	CERAMIC 150PF 10% 50V
C229	1-136-273-91	FILM 75PF 5% 630V
C230	1-136-271-00	FILM 56PF 5% 630V
C234	1-124-907-00	ELECT 10MF 20% 50V
C238	1-136-153-00	FILM 0.01MF 5% 50V
C239	1-130-471-00	MYLAR 0.001MF 5% 50V
C240	1-130-475-00	MYLAR 0.0022MF 5% 50V
C241	1-130-481-00	MYLAR 0.0068MF 5% 50V
C243	1-130-475-00	MYLAR 0.0022MF 5% 50V
C244	1-130-474-00	MYLAR 0.0018MF 5% 50V
C245	1-130-475-00	MYLAR 0.0022MF 5% 50V
C246	1-110-201-00	MYLAR 0.0033MF 5% 50V
C247	1-130-480-00	MYLAR 0.0056MF 5% 50V
C248	1-162-282-31	CERAMIC 100PF 10% 50V
C249	1-162-282-31	CERAMIC 100PF 10% 50V
C250	1-162-290-31	CERAMIC 470PF 10% 50V
C305	1-124-444-00	ELECT 220MF 20% 10V
C306	1-124-444-00	ELECT 220MF 20% 10V



**ELECTRICAL PARTS**

Ref.No.	Part No.	Description			
C307	1-124-444-00	ELECT	220MF	20%	10V
C308	1-124-444-00	ELECT	220MF	20%	10V
C309	1-124-927-11	ELECT	4.7MF	20%	50V
C310	1-124-892-11	ELECT	47MF	20%	10V
C311	1-124-892-11	ELECT	47MF	20%	10V
C312	1-141-225-00	CAP, TUNING, TRIMAR			
C313	1-130-336-00	FILM	0.0068MF	10%	630V
C314	1-124-925-11	ELECT	2.2MF	20%	50V
C315	1-130-289-00	FILM	0.0047MF	5%	100V
C316	1-130-285-00	FILM	0.0033MF	5%	100V
C317	1-130-285-00	FILM	0.0033MF	5%	100V
C318	1-124-791-11	ELECT	1MF	20%	50V
C319	1-124-927-11	ELECT	4.7MF	20%	50V
C320	1-124-791-11	ELECT	1MF	20%	50V
C321	1-124-892-11	ELECT	47MF	20%	10V
C322	1-124-892-11	ELECT	47MF	20%	10V
C324	1-124-472-11	ELECT	470MF	20%	10V
C325	1-124-473-11	ELECT	1000MF	20%	10V
C326	1-124-443-00	ELECT	100MF	20%	10V
C327	1-123-321-00	ELECT	220MF	20%	16V
C328	1-123-321-00	ELECT	220MF	20%	16V
C329	1-124-557-11	ELECT	1000MF	20%	25V
C330	1-124-557-11	ELECT	1000MF	20%	25V
C331	1-124-908-11	ELECT	22MF	20%	25V
C332	1-124-470-11	ELECT	470MF	20%	6.3V
C334	1-124-907-00	ELECT	10MF	20%	50V
C337	1-124-898-11	ELECT	4700MF	20%	16V
C342	1-124-907-00	ELECT	10MF	20%	50V
C343	1-124-907-00	ELECT	10MF	20%	50V
C501	1-124-892-11	ELECT	47MF	20%	10V
C502	1-124-892-11	ELECT	47MF	20%	10V
C503	1-124-892-11	ELECT	47MF	20%	10V
C504	1-124-892-11	ELECT	47MF	20%	10V
C506	1-162-029-00	CERAMIC	47PF	5%	50V
C507	1-162-029-00	CERAMIC	47PF	5%	50V
C508	1-124-925-11	ELECT	2.2MF	20%	50V
C509	1-124-925-11	ELECT	2.2MF	20%	50V
C510	1-124-892-11	ELECT	47MF	20%	10V
C511	1-124-892-11	ELECT	47MF	20%	10V
C512	1-161-377-00	CERAMIC	0.0047MF	30%	16V
C513	1-124-925-11	ELECT	2.2MF	20%	50V
C514	1-124-925-11	ELECT	2.2MF	20%	50V
C515	1-124-470-11	ELECT	470MF	20%	6.3V
C516	1-124-791-11	ELECT	1MF	20%	50V
C517	1-162-100-00	CERAMIC	150PF	10%	50V
C518	1-162-100-00	CERAMIC	150PF	10%	50V
C519	1-162-294-31	CERAMIC	0.001MF	10%	50V
C520	1-161-379-00	CERAMIC	0.01MF	30%	16V
C521	1-161-379-00	CERAMIC	0.01MF	30%	16V
C522	1-161-379-00	CERAMIC	0.01MF	30%	16V
C523	1-161-379-00	CERAMIC	0.01MF	30%	16V
C524	1-124-892-11	ELECT	47MF	20%	10V
C525	1-161-494-00	CERAMIC	0.022MF	30%	25V
C526	1-161-379-00	CERAMIC	0.01MF	30%	16V
C527	1-161-377-00	CERAMIC	0.0047MF	30%	16V
C528	1-161-063-00	CERAMIC	0.1MF	20%	16V
C533	1-124-902-00	ELECT	0.47MF	20%	50V

**ELECTRICAL PARTS**

Ref.No.	Part No.	Description			
C534	1-124-902-00	ELECT	0.47MF	20%	50V
C535	1-162-215-31	CERAMIC	47PF	5%	50V
C801	1-124-791-11	ELECT	1MF	20%	50V
C802	1-124-925-11	ELECT	2.2MF	20%	50V
C851	1-124-791-11	ELECT	1MF	20%	50V
C852	1-124-925-11	ELECT	2.2MF	20%	50V
C891	1-130-480-00	MYLAR	0.0056MF	5%	50V
C892	1-124-892-11	ELECT	47MF	20%	10V
CN301	*1-564-506-11	PLUG, CONNECTOR 3P			
CN302	*1-564-506-11	PLUG, CONNECTOR 3P			
CN303	*1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
CN304	*1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN305	*1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
CN306	*1-564-507-11	PLUG, CONNECTOR 4P			
CN308	*1-564-506-11	PLUG, CONNECTOR 3P			
CN309	*1-564-506-11	PLUG, CONNECTOR 3P			
CN503	*1-564-505-11	PLUG, CONNECTOR 2P			
CN507	*1-564-507-11	PLUG, CONNECTOR 4P			
CN509	*1-564-506-11	PLUG, CONNECTOR 3P			
CN510	*1-564-341-11	PIN, CONNECTOR 7P			
CN511	*1-564-509-11	PLUG, CONNECTOR 6P			
CN512	*1-564-507-11	PLUG, CONNECTOR 4P			
CN514	*1-564-512-41	PLUG, CONNECTOR 9P			
CN516	*1-564-337-00	PIN, CONNECTOR 3P			
CN518	*1-564-336-00	PIN, CONNECTOR 2P			
CN519	*1-564-336-00	PIN, CONNECTOR 2P			
CN520	*1-564-336-00	PIN, CONNECTOR 2P			
CNP701	*1-559-135-11	CORD (WITH CONNECTOR)			
CNP703	*1-558-917-11	CORD (WITH CONNECTOR)			
CNP801	1-564-521-11	PLUG, CONNECTOR 6P			
D301	8-719-940-76	DIODE 1SS132			
D302	8-719-107-94	DIODE 1SS202-1			
D303	8-719-200-77	DIODE 10E2N			
D304	8-719-200-77	DIODE 10E2N			
D305	8-719-200-77	DIODE 10E2N			
D306	8-719-200-77	DIODE 10E2N			
D307	8-719-914-13	DIODE HZ4CLL			
D308	8-719-940-76	DIODE 1SS132			
D309	8-719-910-15	DIODE HZ6C2L			
D310	8-719-940-76	DIODE 1SS132			
D312	8-719-200-77	DIODE 10E2N			
D313	8-719-940-76	DIODE 1SS132			
D314	8-719-200-77	DIODE 10E2N			
D315	8-719-940-76	DIODE 1SS132			
D316	8-719-200-77	DIODE 10E2N			
D317	8-719-940-76	DIODE 1SS132			
D502	8-719-200-77	DIODE 10E2N			
D503	8-719-940-76	DIODE 1SS132			
D504	8-719-107-94	DIODE 1SS202-1			
D505	8-719-107-94	DIODE 1SS202-1			
D506	8-719-940-76	DIODE 1SS132			
D507	8-719-940-76	DIODE 1SS132			
D508	8-719-940-76	DIODE 1SS132			
D509	8-719-940-76	DIODE 1SS132			

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
D510	8-719-940-76	DIODE 1SS132
D515	8-719-940-76	DIODE 1SS132
D516	8-719-940-76	DIODE 1SS132
D517	8-719-200-77	DIODE 10E2N
D518	8-719-940-76	DIODE 1SS132
D519	8-719-940-76	DIODE 1SS132
D521	8-719-940-76	DIODE 1SS132
D522	8-719-940-76	DIODE 1SS132
D523	8-719-940-76	DIODE 1SS132
D526	8-719-940-76	DIODE 1SS132
D527	8-719-940-76	DIODE 1SS132
D528	8-719-940-76	DIODE 1SS132
D529	8-719-940-76	DIODE 1SS132
D801	8-719-940-76	DIODE 1SS132
D802	8-719-940-76	DIODE 1SS132
D804	8-719-940-76	DIODE 1SS132
D805	8-719-942-12	DIODE MVR4868K
D806	8-719-942-12	DIODE MVR4868K
D808	8-719-942-13	DIODE MAY4868K
D809	8-719-940-76	DIODE 1SS132
D810	8-719-940-76	DIODE 1SS132
D811	8-719-940-76	DIODE 1SS132
D812	8-719-940-76	DIODE 1SS132
D813	8-719-940-76	DIODE 1SS132
D814	8-719-942-11	DIODE MPG5785X
D815	8-719-942-11	DIODE MPG5785X
D816	8-719-942-11	DIODE MPG5785X
D817	8-719-942-11	DIODE MPG5785X
D818	8-719-942-11	DIODE MPG5785X
D819	8-719-942-11	DIODE MPG5785X
D820	8-719-942-14	DIODE MAY3877S
D821	8-719-942-15	DIODE MPG3877S
D822	8-719-942-17	DIODE MPR3877S
D823	8-719-940-76	DIODE 1SS132
D824	8-719-940-76	DIODE 1SS132
D825	8-719-940-76	DIODE 1SS132
F301	1-532-259-11	(WR750:AEP,E)...FUSE, TIME-LAG, 1.6A
F301	1-532-555-11	(WR750:Canadian)...FUSE, 1.6A NORMAL
F302	1-532-259-11	(WR750:AEP,E)...FUSE, TIME-LAG, 1.6A
F302	1-532-555-11	(WR750:Canadian)...FUSE, 1.6A NORMAL
HP901	X-3391-102-1	HEAD ASSY, ROTARY
HRP901	X-3391-123-1	HEAD ASSY, ROTARY
IC303	8-759-600-02	IC M5218L
IC304	8-759-601-43	IC M4066BP
IC305	8-759-111-44	IC UPC4570C-1
IC306	8-759-111-44	IC UPC4570C-1
IC307	8-752-018-70	IC CX20187
IC308	8-759-106-61	IC UPC4570HA
IC501	8-759-603-20	IC M50742-404SP
IC502	8-759-701-12	IC CXA4559P
IC503	8-759-602-47	IC M50761-417P
IC801	8-752-321-65	IC CXD1017Q
J301	1-507-982-11	JACK (LARGE TYPE)
J302	1-507-908-11	JACK, PIN 4P
L101	1-408-929-00	MICRO INDUCTOR 27MMH
L102	1-408-924-00	MICRO INDUCTOR 10MMH
L103	1-408-924-00	MICRO INDUCTOR 10MMH
L201	1-408-929-00	MICRO INDUCTOR 27MMH

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
L202	1-408-924-00	MICRO INDUCTOR 10MMH
L203	1-408-924-00	MICRO INDUCTOR 10MMH
L501	1-407-173-XX	MICRO INDUCTOR 220UH
LCD801	1-807-773-11	DISPLAY PANEL, LIQUID CRYSTAL
LPF101	1-231-388-00	FILTER, LOW PASS
LPF201	1-231-388-00	FILTER, LOW PASS
M901	X-3391-117-1	MOTOR ASSY, CAPSTAN
M902	X-3391-118-1	MOTOR ASSY, REEL
M951	X-3391-117-1	MOTOR ASSY, CAPSTAN
M952	X-3391-118-1	MOTOR ASSY, REEL
PL801	1-518-596-11	LAMP, PILOT
PL802	1-518-596-11	LAMP, PILOT
PM901	1-454-428-11	SOLENOID, PLUNGER
PM951	1-454-428-11	SOLENOID, PLUNGER
Q101	8-729-600-27	TRANSISTOR 2SC634SP
Q103	8-729-600-27	TRANSISTOR 2SC634SP
Q104	8-729-600-27	TRANSISTOR 2SC634SP
Q105	8-729-600-27	TRANSISTOR 2SC634SP
Q106	8-729-600-27	TRANSISTOR 2SC634SP
Q107	8-729-600-27	TRANSISTOR 2SC634SP
Q201	8-729-600-27	TRANSISTOR 2SC634SP
Q203	8-729-600-27	TRANSISTOR 2SC634SP
Q204	8-729-600-27	TRANSISTOR 2SC634SP
Q205	8-729-600-27	TRANSISTOR 2SC634SP
Q206	8-729-600-27	TRANSISTOR 2SC634SP
Q207	8-729-600-27	TRANSISTOR 2SC634SP
Q301	8-729-806-26	TRANSISTOR 2SC3901
Q302	8-729-600-27	TRANSISTOR 2SC634SP
Q303	8-729-600-27	TRANSISTOR 2SC634SP
Q304	8-729-101-35	TRANSISTOR 2SC2785-E
Q305	9-986-159-01	TRANSISTOR 2SA1348
Q306	8-729-101-35	TRANSISTOR 2SC2785-E
Q307	8-729-201-78	TRANSISTOR 2SD1406
Q308	8-729-600-27	TRANSISTOR 2SC634SP
Q309	8-729-600-27	TRANSISTOR 2SC634SP
Q310	8-729-117-54	TRANSISTOR 2SA1175
Q311	8-729-117-54	TRANSISTOR 2SA1175
Q312	8-729-111-67	TRANSISTOR 2SB1094-L
Q313	8-729-201-78	TRANSISTOR 2SD1406
Q318	8-729-103-43	TRANSISTOR 2SC634SP
Q501	8-729-806-20	TRANSISTOR 2SA1345
Q502	8-729-806-38	TRANSISTOR 2SC3399
Q503	8-729-802-34	TRANSISTOR 2SD1388
Q504	8-729-802-34	TRANSISTOR 2SD1388
Q505	8-729-806-28	TRANSISTOR 2SC3402
Q506	8-729-103-43	TRANSISTOR 2SB734
Q507	8-729-806-20	TRANSISTOR 2SA1345
Q508	8-729-806-20	TRANSISTOR 2SA1345
Q509	8-729-103-43	TRANSISTOR 2SB734
Q510	8-729-802-34	TRANSISTOR 2SD1388
Q511	8-729-802-34	TRANSISTOR 2SD1388
Q512	8-729-802-22	TRANSISTOR 2SB1014
Q513	8-729-802-22	TRANSISTOR 2SB1014
Q514	8-729-212-02	TRANSISTOR 2SC2120-Y
Q515	8-729-103-43	TRANSISTOR 2SB734
Q516	8-729-802-34	TRANSISTOR 2SD1388

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q517	8-729-802-34	TRANSISTOR 2SD1388			
Q518	8-729-802-22	TRANSISTOR 2SB1014			
Q519	8-729-802-22	TRANSISTOR 2SB1014			
Q520	8-729-806-26	TRANSISTOR 2SC3901			
Q521	8-729-806-26	TRANSISTOR 2SC3901			
Q522	8-729-806-26	TRANSISTOR 2SC3901			
Q523	8-729-806-26	TRANSISTOR 2SC3901			
Q524	9-986-159-01	TRANSISTOR 2SA1348			
Q525	9-986-159-01	TRANSISTOR 2SA1348			
Q526	9-986-159-01	TRANSISTOR 2SA1348			
Q527	9-986-159-01	TRANSISTOR 2SA1348			
Q528	9-986-159-01	TRANSISTOR 2SA1348			
Q529	9-986-159-01	TRANSISTOR 2SA1348			
Q530	8-729-806-26	TRANSISTOR 2SC3901			
Q533	8-729-806-26	TRANSISTOR 2SC3901			
Q534	8-729-600-27	TRANSISTOR 2SC634SP			
Q535	8-729-600-27	TRANSISTOR 2SC634SP			
Q536	8-729-806-26	TRANSISTOR 2SC3402			
Q538	8-729-600-27	TRANSISTOR 2SC634SP			
Q541	8-729-115-20	TRANSISTOR 2SA1345			
Q542	8-729-806-38	TRANSISTOR 2SC3399			
Q543	8-729-806-20	TRANSISTOR 2SA1345			
Q544	8-729-806-20	TRANSISTOR 2SA1345			
Q546	8-729-806-20	TRANSISTOR 2SA1345			
Q547	8-729-806-20	TRANSISTOR 2SA1345			
Q548	1-807-509-11	PHOTO SENSOR (GP-2S09)			
Q549	1-807-509-11	PHOTO SENSOR (GP-2S09)			
Q550	X-3391-141-1	SENSOR ASSY			
Q551	8-729-212-02	TRANSISTOR 2SC2120-Y			
Q552	8-729-806-28	TRANSISTOR 2SC3402			
Q554	8-729-806-28	TRANSISTOR 2SC3402			
Q555	8-729-806-26	TRANSISTOR 2SC3901			
Q556	9-986-159-01	TRANSISTOR 2SA1348			
Q558	8-729-117-54	TRANSISTOR 2SA1175			
Q559	9-986-159-01	TRANSISTOR 2SA1348			
Q560	9-986-159-01	TRANSISTOR 2SA1348			
Q561	9-986-159-01	TRANSISTOR 2SA1348			
Q562	9-986-159-01	TRANSISTOR 2SA1348			
Q564	9-986-159-01	TRANSISTOR 2SA1348			
Q565	9-986-159-01	TRANSISTOR 2SA1348			
Q566	8-729-806-28	TRANSISTOR 2SC3402			
Q567	8-729-806-26	TRANSISTOR 2SC3901			
R101	1-247-713-11	CARBON	1K	5%	1/4W
R102	1-247-726-11	CARBON	33K	5%	1/4W
R103	1-249-433-11	CARBON	22K	5%	1/6W
R104	1-249-417-11	CARBON	1K	5%	1/6W
R108	1-247-717-11	CARBON	2.2K	5%	1/4W
R114	1-249-429-11	CARBON	10K	5%	1/6W
R115	1-249-430-11	CARBON	12K	5%	1/6W
R117	1-249-436-11	CARBON	39K	5%	1/6W
R119	1-247-700-11	CARBON	100	5%	1/4W
R126	1-246-523-00	CARBON	120K	5%	1/4W
R127	1-247-700-11	CARBON	100	5%	1/4W
R128	1-246-524-00	CARBON	130K	5%	1/4W
R129	1-247-722-11	CARBON	5.6K	5%	1/4W
R130	1-249-430-11	CARBON	12K	5%	1/6W
R131	1-249-431-11	CARBON	15K	5%	1/6W

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R132	1-215-477-00	CARBON	220K	5%	1/6W
R133	1-249-423-11	CARBON	3.3K	5%	1/6W
R135	1-215-477-00	CARBON	220K	5%	1/6W
R136	1-249-427-11	CARBON	6.8K	5%	1/6W
R137	1-249-417-11	CARBON	1K	5%	1/6W
R138	1-249-425-11	CARBON	4.7K	5%	1/6W
R140	1-246-531-00	CARBON	270K	5%	1/4W
R141	1-247-700-11	CARBON	100	5%	1/4W
R142	1-246-524-00	CARBON	130K	5%	1/4W
R143	1-247-722-11	CARBON	5.6K	5%	1/4W
R144	1-249-430-11	CARBON	12K	5%	1/6W
R145	1-215-477-00	CARBON	220K	5%	1/6W
R146	1-249-431-11	CARBON	15K	5%	1/6W
R149	1-249-441-11	CARBON	100K	5%	1/6W
R150	1-249-441-11	CARBON	100K	5%	1/6W
R152	1-249-423-11	CARBON	3.3K	5%	1/6W
R153	1-249-427-11	CARBON	6.8K	5%	1/6W
R154	1-247-822-00	CARBON	430	5%	1/6W
R155	1-215-436-00	CARBON	4.3K	5%	1/6W
R156	1-247-840-00	CARBON	2.4K	5%	1/6W
R157	1-249-427-11	CARBON	6.8K	5%	1/6W
R158	1-249-415-11	CARBON	680	5%	1/6W
R159	1-249-429-11	CARBON	10K	5%	1/6W
R161	1-249-421-11	CARBON	2.2K	5%	1/6W
R162	1-249-429-11	CARBON	10K	5%	1/6W
R163	1-249-417-11	CARBON	1K	5%	1/6W
R164	1-249-441-11	CARBON	100K	5%	1/6W
R165	1-249-421-11	CARBON	2.2K	5%	1/6W
R166	1-215-477-00	CARBON	220K	5%	1/6W
R167	1-249-435-11	CARBON	33K	5%	1/6W
R168	1-249-437-11	CARBON	47K	5%	1/6W
R169	1-249-409-11	CARBON	220	5%	1/6W
R170	1-249-429-11	CARBON	10K	5%	1/6W
R171	1-249-424-11	CARBON	3.9K	5%	1/6W
R172	1-215-436-00	CARBON	4.3K	5%	1/6W
R174	1-249-405-11	CARBON	100	5%	1/6W
R175	1-249-429-11	CARBON	10K	5%	1/6W
R176	1-249-417-11	CARBON	1K	5%	1/6W
R177	1-215-436-00	CARBON	4.3K	5%	1/6W
R178	1-249-417-11	CARBON	1K	5%	1/6W
R179	1-249-441-11	CARBON	100K	5%	1/6W
R180	1-249-425-11	CARBON	4.7K	5%	1/6W
R181	1-249-441-11	CARBON	100K	5%	1/6W
R182	1-249-425-11	CARBON	4.7K	5%	1/6W
R183	1-249-459-11	CARBON	12K	5%	1/4W
R201	1-247-713-11	CARBON	1K	5%	1/4W
R202	1-247-726-11	CARBON	33K	5%	1/4W
R203	1-249-433-11	CARBON	22K	5%	1/6W
R204	1-249-417-11	CARBON	1K	5%	1/6W
R208	1-247-717-11	CARBON	2.2K	5%	1/4W
R214	1-249-429-11	CARBON	10K	5%	1/6W
R215	1-249-430-11	CARBON	12K	5%	1/6W
R217	1-249-436-11	CARBON	39K	5%	1/6W
R219	1-247-700-11	CARBON	100	5%	1/4W
R226	1-246-523-00	CARBON	120K	5%	1/4W
R227	1-247-700-11	CARBON	100	5%	1/4W
R228	1-246-524-00	CARBON	130K	5%	1/4W

# TC-WR77/WR750

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R229	1-247-722-11	CARBON	5.6K	5%	1/4W
R230	1-249-430-11	CARBON	12K	5%	1/6W
R231	1-249-431-11	CARBON	15K	5%	1/6W
R232	1-215-477-00	CARBON	220K	5%	1/6W
R233	1-249-423-11	CARBON	3.3K	5%	1/6W
R235	1-215-477-00	CARBON	220K	5%	1/6W
R236	1-249-427-11	CARBON	6.8K	5%	1/6W
R237	1-249-417-11	CARBON	1K	5%	1/6W
R238	1-249-425-11	CARBON	4.7K	5%	1/6W
R240	1-246-531-00	CARBON	270K	5%	1/4W
R241	1-247-700-11	CARBON	100	5%	1/4W
R242	1-246-524-00	CARBON	130K	5%	1/4W
R243	1-247-722-11	CARBON	5.6K	5%	1/4W
R244	1-249-430-11	CARBON	12K	5%	1/6W
R245	1-215-477-00	CARBON	220K	5%	1/6W
R246	1-249-431-11	CARBON	15K	5%	1/6W
R249	1-249-441-11	CARBON	100K	5%	1/6W
R250	1-249-441-11	CARBON	100K	5%	1/6W
R252	1-249-423-11	CARBON	3.3K	5%	1/6W
R253	1-249-427-11	CARBON	6.8K	5%	1/6W
R254	1-247-822-00	CARBON	430	5%	1/6W
R255	1-215-436-00	CARBON	4.3K	5%	1/6W
R256	1-247-840-00	CARBON	2.4K	5%	1/6W
R257	1-249-427-11	CARBON	6.8K	5%	1/6W
R258	1-249-415-11	CARBON	680	5%	1/6W
R259	1-249-429-11	CARBON	10K	5%	1/6W
R261	1-249-421-11	CARBON	2.2K	5%	1/6W
R262	1-249-429-11	CARBON	10K	5%	1/6W
R263	1-249-417-11	CARBON	1K	5%	1/6W
R264	1-249-441-11	CARBON	100K	5%	1/6W
R265	1-249-421-11	CARBON	2.2K	5%	1/6W
R266	1-215-477-00	CARBON	220K	5%	1/6W
R267	1-249-435-11	CARBON	33K	5%	1/6W
R268	1-249-437-11	CARBON	47K	5%	1/6W
R269	1-249-409-11	CARBON	220	5%	1/6W
R270	1-249-429-11	CARBON	10K	5%	1/6W
R271	1-249-424-11	CARBON	3.9K	5%	1/6W
R272	1-215-436-00	CARBON	4.3K	5%	1/6W
R274	1-249-405-11	CARBON	100	5%	1/6W
R275	1-249-429-11	CARBON	10K	5%	1/6W
R276	1-249-417-11	CARBON	1K	5%	1/6W
R277	1-215-436-00	CARBON	4.3K	5%	1/6W
R278	1-249-417-11	CARBON	1K	5%	1/6W
R279	1-249-441-11	CARBON	100K	5%	1/6W
R280	1-249-425-11	CARBON	4.7K	5%	1/6W
R281	1-249-441-11	CARBON	100K	5%	1/6W
R282	1-249-425-11	CARBON	4.7K	5%	1/6W
R283	1-249-459-11	CARBON	12K	5%	1/4W
R301	1-247-704-11	CARBON	220	5%	1/4W
R302	1-247-704-11	CARBON	220	5%	1/4W
R303	1-249-417-11	CARBON	1K	5%	1/6W
R304	1-246-457-00	CARBON	220	5%	1/4W
R305	1-246-457-00	CARBON	220	5%	1/4W
R306	1-249-437-11	CARBON	47K	5%	1/6W
R307	1-249-411-11	CARBON	330	5%	1/6W
R308	1-212-853-11	FUSIBLE	6.8	5%	1/4W
R309	1-249-431-11	CARBON	15K	5%	1/6W

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R310	1-249-431-11	CARBON	15K	5%	1/6W
R311	1-249-429-11	CARBON	10K	5%	1/6W
R312	1-247-854-00	CARBON	9.1K	5%	1/6W
R313	1-249-425-11	CARBON	4.7K	5%	1/6W
R314	1-249-417-11	CARBON	1K	5%	1/6W
R315	1-249-425-11	CARBON	4.7K	5%	1/6W
R316	1-249-431-11	CARBON	15K	5%	1/6W
R317	1-249-425-11	CARBON	4.7K	5%	1/6W
R318	1-214-777-00	METAL	100K	1%	1/4W
R319	1-247-714-11	CARBON	1.2K	5%	1/4W
R320	1-247-714-11	CARBON	1.2K	5%	1/4W
R321	1-246-457-00	CARBON	220	5%	1/4W
R322	1-247-717-11	CARBON	2.2K	5%	1/4W
R323	1-247-717-11	CARBON	2.2K	5%	1/4W
R324	1-247-717-11	CARBON	2.2K	5%	1/4W
R325	1-247-717-11	CARBON	2.2K	5%	1/4W
R326	1-247-717-11	CARBON	2.2K	5%	1/4W
R327	1-247-713-11	CARBON	1K	5%	1/4W
R328	1-247-717-11	CARBON	2.2K	5%	1/4W
R329	1-247-725-11	CARBON	10K	5%	1/4W
R330	1-247-717-11	CARBON	2.2K	5%	1/4W
R331	1-249-429-11	CARBON	10K	5%	1/6W
R332	1-249-405-11	CARBON	100	5%	1/6W
R334	1-249-420-11	CARBON	1.8K	5%	1/6W
R335	1-249-421-11	CARBON	2.2K	5%	1/6W
R336	1-249-417-11	CARBON	1K	5%	1/6W
R337	1-249-429-11	CARBON	10K	5%	1/6W
R338	1-249-417-11	CARBON	1K	5%	1/6W
R339	1-249-429-11	CARBON	10K	5%	1/6W
R342	1-249-425-11	CARBON	4.7K	5%	1/6W
R343	1-249-437-11	CARBON	47K	5%	1/6W
R344	1-249-417-11	CARBON	1K	5%	1/6W
R345	1-249-425-11	CARBON	4.7K	5%	1/6W
R346	1-249-441-11	CARBON	100K	5%	1/6W
R353	1-249-427-11	CARBON	6.8K	5%	1/6W
R354	1-249-441-11	CARBON	100K	5%	1/6W
R355	1-249-423-11	CARBON	3.3K	5%	1/6W
R501	1-249-429-11	CARBON	10K	5%	1/6W
R503	1-249-418-11	CARBON	1.2K	5%	1/6W
R504	1-249-418-11	CARBON	1.2K	5%	1/6W
R506	1-249-421-11	CARBON	2.2K	5%	1/6W
R507	1-249-429-11	CARBON	10K	5%	1/6W
R508	1-249-431-11	CARBON	15K	5%	1/6W
R509	1-249-431-11	CARBON	15K	5%	1/6W
R510	1-249-431-11	CARBON	15K	5%	1/6W
R511	1-249-431-11	CARBON	15K	5%	1/6W
R513	1-249-418-11	CARBON	1.2K	5%	1/6W
R514	1-249-422-11	CARBON	2.7K	5%	1/6W
R515	1-249-414-11	CARBON	560	5%	1/6W
R516	1-249-418-11	CARBON	1.2K	5%	1/6W
R517	1-249-418-11	CARBON	1.2K	5%	1/6W
R518	1-249-418-11	CARBON	1.2K	5%	1/6W
R519	1-249-418-11	CARBON	1.2K	5%	1/6W
R520	1-249-418-11	CARBON	1.2K	5%	1/6W
R521	1-249-422-11	CARBON	2.7K	5%	1/6W
R522	1-249-414-11	CARBON	560	5%	1/6W
R523	1-249-418-11	CARBON	1.2K	5%	1/6W

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R524	1-249-418-11	CARBON	1.2K	5%	1/6W
R525	1-249-418-11	CARBON	1.2K	5%	1/6W
R526	1-249-418-11	CARBON	1.2K	5%	1/6W
R528	1-249-401-11	CARBON	47	5%	1/6W
R529	1-249-401-11	CARBON	47	5%	1/6W
R530	1-249-401-11	CARBON	47	5%	1/6W
R531	1-249-399-11	CARBON	33	5%	1/6W
R532	1-249-399-11	CARBON	33	5%	1/6W
R533	1-249-399-11	CARBON	33	5%	1/6W
R534	1-249-413-11	CARBON	470	5%	1/6W
R535	1-249-399-11	CARBON	33	5%	1/6W
R536	1-249-399-11	CARBON	33	5%	1/6W
R537	1-249-397-11	CARBON	22	5%	1/6W
R540	1-249-429-11	CARBON	10K	5%	1/6W
R541	1-249-421-11	CARBON	2.2K	5%	1/6W
R542	1-249-421-11	CARBON	2.2K	5%	1/6W
R543	1-249-421-11	CARBON	2.2K	5%	1/6W
R544	1-249-421-11	CARBON	2.2K	5%	1/6W
R545	1-249-421-11	CARBON	2.2K	5%	1/6W
R546	1-249-421-11	CARBON	2.2K	5%	1/6W
R547	1-249-421-11	CARBON	2.2K	5%	1/6W
R548	1-249-421-11	CARBON	2.2K	5%	1/6W
R549	1-249-399-11	CARBON	33	5%	1/6W
R553	1-249-425-11	CARBON	4.7K	5%	1/6W
R554	1-249-417-11	CARBON	1K	5%	1/6W
R555	1-249-417-11	CARBON	1K	5%	1/6W
R556	1-249-441-11	CARBON	100K	5%	1/6W
R557	1-249-434-11	CARBON	27K	5%	1/6W
R558	1-249-429-11	CARBON	10K	5%	1/6W
R559	1-249-409-11	CARBON	220	5%	1/6W
R560	1-249-441-11	CARBON	100K	5%	1/6W
R561	1-249-429-11	CARBON	10K	5%	1/6W
R562	1-249-417-11	CARBON	1K	5%	1/6W
R563	1-246-457-00	CARBON	220	5%	1/4W
R564	1-249-429-11	CARBON	10K	5%	1/6W
R566	1-249-441-11	CARBON	100K	5%	1/6W
R567	1-249-441-11	CARBON	100K	5%	1/6W
R568	1-249-429-11	CARBON	10K	5%	1/6W
R569	1-249-421-11	CARBON	2.2K	5%	1/6W
R570	1-215-485-00	CARBON	470K	5%	1/6W
R571	1-249-423-11	CARBON	3.3K	5%	1/6W
R572	1-249-441-11	CARBON	100K	5%	1/6W
R574	1-249-429-11	CARBON	10K	5%	1/6W
R575	1-249-428-11	CARBON	8.2K	5%	1/6W
R576	1-249-420-11	CARBON	1.8K	5%	1/6W
R577	1-249-441-11	CARBON	100K	5%	1/6W
R578	1-249-417-11	CARBON	1K	5%	1/6W
R579	1-249-441-11	CARBON	100K	5%	1/6W
R580	1-249-429-11	CARBON	10K	5%	1/6W
R581	1-249-441-11	CARBON	100K	5%	1/6W
R582	1-249-417-11	CARBON	1K	5%	1/6W
R583	1-249-429-11	CARBON	10K	5%	1/6W
R584	1-249-438-11	CARBON	56K	5%	1/6W
R585	1-249-441-11	CARBON	100K	5%	1/6W
R586	1-249-430-11	CARBON	12K	5%	1/6W
R587	1-249-432-11	CARBON	18K	5%	1/6W
R588	1-249-405-11	CARBON	100	5%	1/6W

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R589	1-249-433-11	CARBON	22K	5%	1/6W
R590	1-249-393-11	CARBON	10	5%	1/6W
R593	1-249-429-11	CARBON	10K	5%	1/6W
R594	1-249-429-11	CARBON	10K	5%	1/6W
R595	1-249-441-11	CARBON	100K	5%	1/6W
R596	1-249-441-11	CARBON	100K	5%	1/6W
R597	1-249-441-11	CARBON	100K	5%	1/6W
R598	1-249-441-11	CARBON	100K	5%	1/6W
R599	1-249-393-11	CARBON	10	5%	1/6W
R600	1-249-393-11	CARBON	10	5%	1/6W
R601	1-249-393-11	CARBON	10	5%	1/6W
R602	1-249-393-11	CARBON	10	5%	1/6W
R605	1-249-441-11	CARBON	100K	5%	1/6W
R606	1-249-441-11	CARBON	100K	5%	1/6W
R607	1-249-441-11	CARBON	100K	5%	1/6W
R608	1-215-493-00	CARBON	1M	5%	1/6W
R609	1-249-429-11	CARBON	10K	5%	1/6W
R610	1-249-421-11	CARBON	2.2K	5%	1/6W
R611	1-249-429-11	CARBON	10K	5%	1/6W
R613	1-247-836-00	CARBON	1.6K	5%	1/6W
R614	1-247-836-00	CARBON	1.6K	5%	1/6W
R615	1-249-429-11	CARBON	10K	5%	1/6W
R616	1-249-429-11	CARBON	10K	5%	1/6W
R621	1-249-434-11	CARBON	27K	5%	1/6W
R627	1-249-409-11	CARBON	220	5%	1/6W
R628	1-249-421-11	CARBON	2.2K	5%	1/6W
R631	1-249-441-11	CARBON	100K	5%	1/6W
R634	1-206-467-00	METAL OXIDE	15	5%	2W F
R635	1-215-493-00	CARBON	1M	5%	1/6W
R636	1-249-422-11	CARBON	2.7K	5%	1/6W
R639	1-249-405-11	CARBON	100	5%	1/6W
R640	1-249-405-11	CARBON	100	5%	1/6W
R801	1-247-872-00	CARBON	51K	5%	1/6W
R802	1-249-437-11	CARBON	47K	5%	1/6W
R803	1-215-493-00	CARBON	1M	5%	1/6W
R851	1-247-872-00	CARBON	51K	5%	1/6W
R852	1-249-437-11	CARBON	47K	5%	1/6W
R853	1-215-493-00	CARBON	1M	5%	1/6W
R891	1-215-483-00	CARBON	390K	5%	1/6W
R893	1-249-409-11	CARBON	220	5%	1/6W
R894	1-247-834-00	CARBON	1.3K	5%	1/6W
R895	1-249-441-11	CARBON	100K	5%	1/6W
RV101	1-228-670-00	RES, VAR, SLIDE 20K (REC LEVEL:L)			
RV102	1-230-630-11	RES, ADJ, CARBON 10K			
RV103	1-230-630-11	RES, ADJ, CARBON 10K			
RV104	1-230-630-11	RES, ADJ, CARBON 10K			
RV201	1-228-670-00	RES, VAR, SLIDE 20K (REC LEVEL:R)			
RV202	1-230-630-11	RES, ADJ, CARBON 10K			
RV203	1-230-630-11	RES, ADJ, CARBON 10K			
RV204	1-230-630-11	RES, ADJ, CARBON 10K			
RV501	1-228-995-00	RES, ADJ, CARBON 22K			
RV502	1-228-995-00	RES, ADJ, CARBON 22K			
RV503	1-228-995-00	RES, ADJ, CARBON 22K			
RV504	1-228-995-00	RES, ADJ, CARBON 22K			
RV505	1-228-995-00	RES, ADJ, CARBON 22K			
RY301	1-515-645-11	RELAY			

The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
S301	1-570-981-11	SWITCH, PUSH (3 KEY)(TAPE SELECT)
S302	1-570-531-11	SWITCH, PUSH (2 KEY)(DOLBY NR)
S303	1-570-103-21	SWITCH, PUSH (1 KEY)(POWER)
S519	1-554-208-00	(WR750)...SWITCH, SLIDE (DECK-B:TIMER)
S520	1-554-208-00	SWITCH, SLIDE (DIRECTION MODE)
S801	1-554-980-11	SWITCH, KEY BOARD(SYNCR0 DUBBING NORMAL)
S802	1-554-980-11	SWITCH, KEY BOARD (SYNCR0 DUBBING HIGH)
S804	1-554-980-11	SWITCH, KEY BOARD (AUTO PAUSE)
S805	1-554-980-11	SWITCH, KEY BOARD (DECK-A:REW)
S806	1-554-980-11	SWITCH, KEY BOARD (DECK-A:PLAY REV)
S807	1-554-980-11	SWITCH, KEY BOARD (DECK-A:STOP)
S808	1-554-980-11	SWITCH, KEY BOARD (DECK-A:PLAY FWD)
S809	1-554-980-11	SWITCH, KEY BOARD (DECK-A:FF)
S810	1-554-980-11	SWITCH, KEY BOARD (DECK-B:REW)
S811	1-554-980-11	SWITCH, KEY BOARD (DECK-B:PLAY REV)
S812	1-554-980-11	SWITCH, KEY BOARD (DECK-B:STOP)
S813	1-554-980-11	SWITCH, KEY BOARD (DECK-B:PLAY FWD)
S814	1-554-980-11	SWITCH, KEY BOARD (DECK-B:FF)
S815	1-554-980-11	SWITCH, KEY BOARD (DECK-B:REC)
S816	1-554-980-11	SWITCH, KEY BOARD (DECK-B:PAUSE)
S817	1-554-980-11	SWITCH, KEY BOARD (DECK-B:REC MUTE)
S818	1-554-980-11	SWITCH, KEY BOARD (AMS)
S901	1-570-720-11	SWITCH, PUSH (1 KEY)(DECK-A HALF DET)
S902	1-570-720-11	SWITCH, PUSH (TAPE SELECT)
S903	1-570-719-11	SWITCH, LEAF (DECK-A LOADING)
S905	1-570-721-11	SWITCH, LEAF (DECK-A REV ON)
S906	1-570-307-11	(WR750:E)...SWITCH, VOLTAGE CHANGE
S951	1-570-722-11	SWITCH, PUSH (1 KEY)(DECK-B HERF DET)
S953	1-570-719-11	SWITCH, LEAF (DECK-B LOADING)
S954	1-570-720-11	SWITCH, PUSH (1 KEY)(DECK-B ERASE PROOF)
S955	1-570-721-11	SWITCH, LEAF (DECK-B REV ON)
S956	1-570-720-11	SWITCH, PUSH (1 KEY)(DECK-B ERASE PROOF)
SPK101	1-235-186-00	ENCAPSULATED COMPONENT
SPK201	1-235-186-00	ENCAPSULATED COMPONENT
T301	1-433-308-11	TRANSFORMER, BIAS OSCILLATION
T901	1-448-376-11	(WR750:US,Canadian,WR77).....TRANSFORMER, POWER
T901	1-448-377-11	(WR750:AEP).....TRANSFORMER, POWER
T901	1-448-378-11	(WR750:E).....TRANSFORMER, POWER
X501	1-567-094-00	VIBRATOR, CERAMIC
X502	1-527-532-00	OSCILLATOR, CERAMIC

## ACCESSORY &amp; PACKING MATERIAL

Part No.	Description
1-558-233-11	CORD (WITH CONNECTOR)(SIRCS)4P
1-558-787-11	CORD, CONNECTION
3-327-651-41	INDIVIDUAL CARTON
3-332-462-01	CUSHION
3-701-630-00	BAG, POLYETHYLENE
3-703-450-01	INSTRUCTION
3-703-680-00	LABEL, CAUTION, SUB, NEW UL
3-703-713-41	STICKER, SONY SYMBOL (10)
3-703-978-01	LABEL (A), FIRE CAUTION
3-765-917-21	MANUAL, INSTRUCTION
3-766-973-21	CARD, CUSTOMER INQUIRY
4-858-078-00	SHEET, PROTECTION

The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## SECTION 8

### TROUBLESHOOTING

The following troubleshooting will help you correct the most common problems encountered with a tape deck. Should any problem persists after you have made these checks, consult your nearest Sony service facility.

Before proceeding with these trouble checks, first check these basic points:

- The power cord must be firmly connected.
- Amplifier connections must be firmly made.
- Heads, capstans and pinch rollers should be clean.
- The amplifier controls and switches should be set correctly.

	Trouble	Cause and remedy
TAPE OPERATION BUTTONS AND TAPE TRANSPORT	The tape does not run when the operation button is pressed.	The unit does not work for about two seconds after the power is turned on. → Wait until the <b>II</b> indicator goes off.
		The cassette is not properly inserted.
		The cassette holder is not properly closed.
		The <b>II</b> button is pressed. → Press the <b>II</b> button again to release the pause mode.
	Playback or recording begins just as the power is turned on (TC-WR750).	The <b>TIMER</b> switch is not set to OFF. → Set the <b>TIMER</b> switch to OFF.
	The transport noise seems excessively loud at the fast winding mode.	No trouble. This situation depends upon the cassette used.
	The automatic shut-off mechanism activates before the tape ends.	The cassette has tape slack. The cassette is defective.
RECORDING AND PLAYBACK	The <b>●</b> button does not activates.	No cassette is in the holder. The cassette tab has removed. → Cover the hole with plastic tape
	The AMS function does not operate.	A blank space is too short (less than 4 seconds). → Insert over 4-second blank with the record muting button.
		There is noise in the blank space between selections.
	Playback cannot be heard, recording cannot be made, or the sound level decreases.	The heads are dirty. The connections are not made properly. The amplifier input selector is not set to the correct position.
	Excessive wow and flutter or drop out	The heads, capstans or pinch rollers are dirty.
	Incomplete erasure	The erase head is dirty.
	Noise or erasure occurs.	Magnetic build-up on the head. → Demagnetize the head.
NOISE	Unbalanced tone in higher frequencies.	The <b>DOLBY NR</b> switch is not set to the correct position. → During playback, set the switch to the same position used when the cassette was recorded.
		The unit is placed near a television set.
	A hum is heard.	The unit is placed directly on or under the amplifier. → Move the unit away from the amplifier.
	Noise is recorded.	Recording is made near a television set or a color monitor. → Move the unit away from the television set or color monitor.